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Cover: Ken, an orangutan baby, photo  
courtesy of the Zoological Society of  
San Diego



## Superbird

Up in the air...it's a man! It's a plane! No, it's superbird!

A tiny sandpiper has set a new bird-flight record. It flew 2,800 miles—from Manomet, Massachusetts to Guyana, a nation in South America. The trip took just four days! Bird-experts say that's super-fast.

Sandpipers are shorebirds. That means—you guessed it—they like to hang out at the shore. Every year, about 40 different kinds of shorebirds migrate from their summer breeding grounds in the Arctic to their winter roosts in South America.

To learn more about bird travel, Manomet scientists catch some of the birds on their way south. They put special bands on the birds' legs so they will be able to identify the birds later. Then they set the birds free.

The former champion bird was a ruddy turnstone, another kind of shorebird that flew 2,750 in four days. The sandpiper beat the turnstone's record by about 12 miles a day!

PHOTO: ANIMALS ANIMALS © M. A. CHAPPELL



ILLUSTRATION BY MARY DUARTE

## Go West, Young Cow

The sandpiper may be super speedy, but it's not the only migrating animal making headlines this year. Recently, 20 purple cows traveled across the U.S.!

As part of a geography project, schoolkids in Vermont left the cows—which are made out of plywood—by the side of the road. The cows are about three feet by three feet, small enough to fit in the backseat of a car.

Each cow wore a sign saying where it was headed. Utah, Florida, Georgia, Texas—the cows were going to schools all over the country. The kids taped instructions and self-addressed postcards on the cows' backs. The instructions asked drivers to send back the postcards. This would keep the kids up-to-date on where the

cows had been.

Mapping the cows' progress, the kids found that the purple animals weren't just travelling in cars. They were also riding trains, boats, ferries, and private planes! So far, eight of the cows have reached their destinations. One cow went 3,000 miles, to Austin, Texas, in just three weeks!

## Ancient Dip

Sometimes when people dig in the ground they find buried treasure. Sometimes they find buried junk. But two workmen in Tipperary, Ireland, found something really odd—a 100-pound ball of cheese!

The two men found the cheese ball while digging in a bog. The workers lugged their discovery to an archaeologist. He studied the cheese and told them it's about 1,500 years old!

That means, people buried it in the 5th or 6th Century. The cold wet ground kept the food fresh. Is the cheese good enough to eat? Maybe, but so far nobody has asked for a taste!

ILLUSTRATION BY NED SHAW





## Candy Snaps

How would you like to have your face on a piece of candy? Thanks to inventor Robert Newsteder of Utica, NY, now you can! Mr. Newsteder calls his creation "Lick Pix." It's a photograph printed on a piece of chocolate.

To see how this works, take a magnifying glass and look at a photo on this page. You'll see lots of little dots. The chocolate photos work the same way, but with little pits in chocolate instead of dots on paper. To "print" the picture, you brush powdered sugar across the chocolate and fill the pits.

"I started out by scratching pictures on the backs of candy bars



with a toothpick." Mr. Newsteder told CONTACT. "When I rubbed in some powdered sugar, the pictures came out beautifully!"

What a way for a bored chocolate-lover to, uh, lick the problem.



## Believe It Or Nut!

Check out this nutty mystery: Pour out a can of mixed nuts. Then put all the Brazil nuts (they're the biggest nuts) back in the can. Add the rest of the nuts, put the lid on, and shake the can over and over. The result may surprise you: The big, heavy, Brazil nuts will rise to the top! Why?

The answer to that question could save people time and money. Companies that make products such as medicine, glass and paint need to be able to mix powders well. But big powder particles rise to the top just like big nuts, giving the powder-mixers fits.

That's why Dr. Anthony Rosato and a team of scientists at Carnegie-Mellon University in Pittsburgh set out to "crack" the nut case. They wrote a computer program that imitates nuts in a shaking can. By running the program, they shook the imaginary can again and again.

They found that shaking a can creates little air pockets between nuts. Little nuts can fall into these little air pockets, but big nuts can't. As the little nuts sift down, they push the big nuts up.

So what's a powder-mixer to do? "There's no solution to this problem so far," Dr. Rosato told

CONTACT. But now that scientists understand rising nuts, maybe they'll find a way to fix the mix!

## So What's New?

You tell us and you'll get a nifty CONTACT T-shirt—if we print your story. Send us any science stories from the news that you think our readers would like to know about. (Be sure to tell us where you heard the story.) Send to:

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Loch and Lisa  
are orangutan  
twins—about nine  
months old.

# BRINGING UP BABY

Eric Weiner

From aardvarks to zebras,  
zookeepers play parent

Cute and cuddly, playful and sweet—babies are certainly easy to love. And not just human babies. But baby hippos too! And baby goats, and baby gorillas, and baby giraffes...

Zoo-keepers get to know lots of wild animal babies. When an adult female animal gets sick, the zoo-keepers have to take over the mother's

job. They have to pet the babies, feed them, rock them, play with them, and comfort them. In fact, a zoo-keeper has to learn how to be a good parent for almost every kind of wild animal at the zoo—from baby aardvarks to baby zebras!

## What's Normal for a Goat?

At the San Diego Wild Animal Park and at the nearby San Diego Zoo in California, the human nursery-workers are always standing by, ready to baby-sit. Animal babies may be brought in anytime, day or night, for emergency care.

"The first thing we do is make sure the animal is the right temperature," says Janet Hawes, a zoo-keeper at the San Diego Zoo. "That means that you have to know what's normal for each animal. A normal temperature for a gorilla is not the same as the normal temperature for a goat." (A gorilla's normal temperature is 98°-99°F, while a goat's is 100°-103°F.)

A cold baby may need a hot water bottle. Or it



PHOTOS © ZOOLOGICAL SOCIETY OF SAN DIEGO

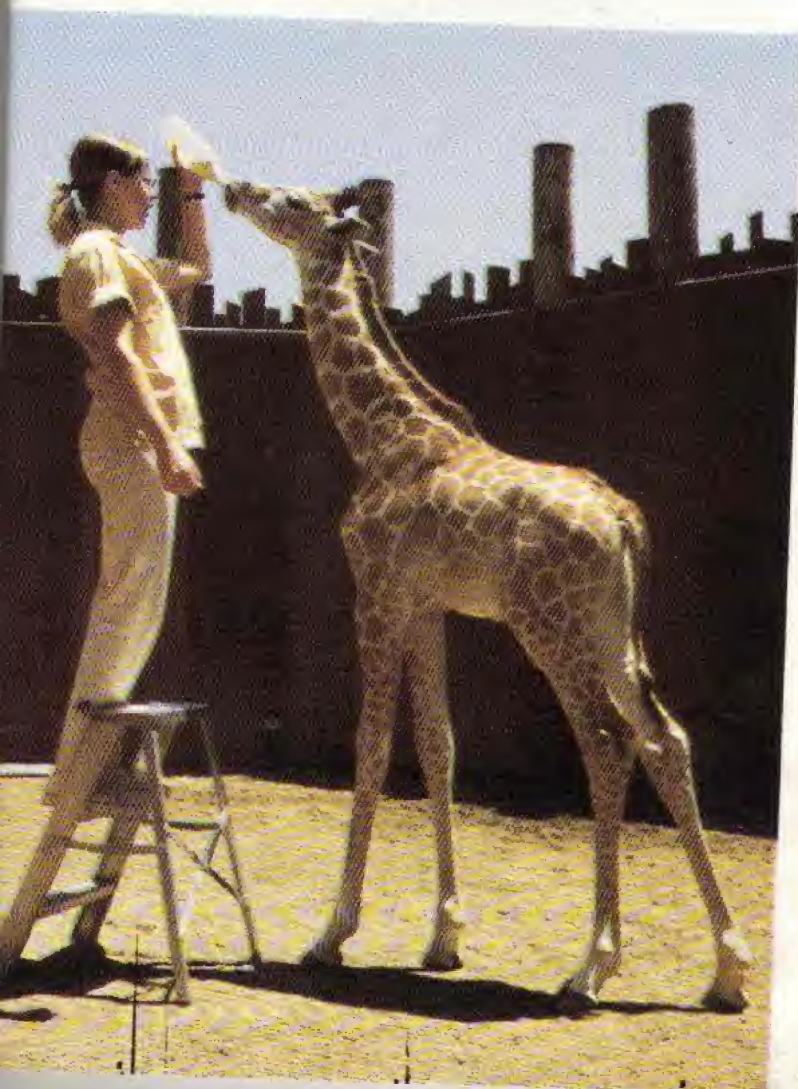
**Left:** A tiny newborn otter drinks from an eyedropper.



**Right:** Megan, a baby koala, doesn't like getting weighed. So Nancy Clague, a zoo-keeper, lets her cling to a koala doll. Then Nancy subtracts the weight of the doll!



**Below:** How do you play mom to a giraffe baby? With the help of a ladder!



might have to spend some time in an *isolette*—a heat-controlled container. Whatever its temperature, the baby usually needs food right away. But feeding a wild animal baby may not be easy.

### ***Animals Eat Baby Food, Too***

Michael Mace is a bird-keeper at the Wild Animal Park. When an adult Gouldian finch left its nest last August, Michael had to use a Q-tip to feed the finch's five tiny babies. As the birds peeped wildly, he dipped the Q-tip into a small bowl of baby food (the same stuff that human babies eat). Then he tried to drop a gob into each of the open mouths. It worked!

Not all animal babies are fed with Q-tips. Take mammals, for instance. They drink milk. But they're used to nursing from their mother's breast, not from a bottle. To relax the mammals—and get them started on the bottle—some zoo-keepers have learned the sounds made by the babies' mothers. Janet Hawes can make the sounds of almost 100 different kinds of animals. "Kee-kee-kee," she says, holding her lips close together. "That's an antelope!"

"Look at these," says Janet, opening up a large white cabinet. On the shelves are rubber nipples of many different sizes. Some are the size of a fingertip (to feed a baby lemur). Others are the size of a fist (to feed a baby rhino).

Zoo-keepers not only use different-size nipples, but also different feeding positions. ➔



"You have to ask yourself how the baby would feed from its real mother," says Janet. "Then you try to imitate that."

Some babies—deer, for instance—are used to nursing from a mother's belly. They expect to nurse in a dark place. For these animals, Janet puts a towel over her head and holds the bottle under the towel, where it's dark.

But every baby, says Janet, is different. "Sometimes a baby will only lick the milk off your nose! You have to put some milk on your nose, and while the animal is licking it off you have to put the nipple of the bottle right next to your nose and try to sneak it into the animal's mouth!"

Getting the baby mammals to drink their milk is a matter of life or death. And every kind of mammal needs a different milk formula. To figure out what kind to use, the zoo-keepers try to get a sample of the animal mother's milk. But milking a rhinoceros, say, is not as easy as milking a cow. Sometimes, when the zoo-keepers can't get a sample, they just have to guess.

"We'll start with a formula that worked with a similar kind of animal," says Janet. "For



**Above:** Peggy Sexton and Jeanette Anderson catch a cheetah that needs care.

**Left:** A two week old baby lemur stays warm in an incubator.



instance, what worked on one kind of porcupine baby may work on another."

### **Monkey Hugs**

Most wild animal babies need more than just food and warmth. They also need a feeling of security, affection, and a chance to play. "If a baby is used to holding on to its mom," says Janet, "then we always give it something to hold onto, like a security blanket."

Instead of blankets, nursery workers often give the baby monkeys and baby apes Rockabye Bears. This brand of teddy bear is meant for human babies, but it seems to please monkey and ape babies, too. When tilted, the stuffed bear makes comforting gurgling sounds. These sounds remind a baby of the sounds it heard when it was in the water of its mother's womb.

Rockabye Bears help monkey and ape babies feel more at home, but the animals still need lots



of comforting. "Gorilla babies are used to being held by their mothers 24 hours a day," explains Peggy Sexton, a zoo-keeper at the Wild Animal Park. The keepers can't hold the baby gorillas *all* the time, but they do hold them a lot.

Which is harder to manage—a baby human or a baby gorilla? "You have to remember," says Peggy, "that a gorilla has thumbs on its feet. That means it has four hands. It gets into everything!"

The keepers give the babies toys to play with. And whenever possible, they put babies in pens with other babies of the same species, so the babies can play together.

That's not always possible. Right now, Ke-Lai is the only baby snow leopard in the zoo's nursery. So Tina Watson, a nursery worker, makes a point of rough-housing with Ke-Lai every day.

"She loves it, but I have to be careful," says Tina. "She already has very sharp teeth!"

### Josie

If you've ever loved a pet, you know that humans and animals can get very attached to one another. Tina Watson still thinks about Josie, an orangutan she met on her very first night on the job.



**Above:** Three-month-old Bo, a Sumatran orangutan, cuddles up with a security doll.

**Below:** Gordy, a four-month-old lowland gorilla, gets a smile from Tina Watson.



It was quite a first night. When Josie arrived at the nursery, she was near death. Left by her mother, the baby ape had had nothing to eat or drink for two weeks. And she was in shock.

Since the other workers were busy with other emergencies, Tina's boss put her in charge of the orangutan. "My boss told me that this baby needed all of its will to live, or it would die."

To save her, Tina had to hold the orangutan in her arms all night long. Josie survived, and the keeper and the orangutan became close friends.

Not all zoo stories end as happily as Josie's. Even with the zoo-keepers help, some baby animals just don't survive. Connie, an elephant at the Wild Animal Park, was pregnant for 672 days. (Elephants stay pregnant for an average of 22 months—a lot longer than humans.) Alan Roocroft, the elephant trainer, took Connie for long walks to keep her healthy. But the long-awaited elephant baby died during birth.

"We waited so long!" says Alan. "I'm so sad!"

### Leaving the Nest

When Peggy Sexton was hand-raising Alberta, a baby gorilla, she used to take her to see the adult gorillas at the Wild Animal Park. "I wanted to prepare her for the day she would

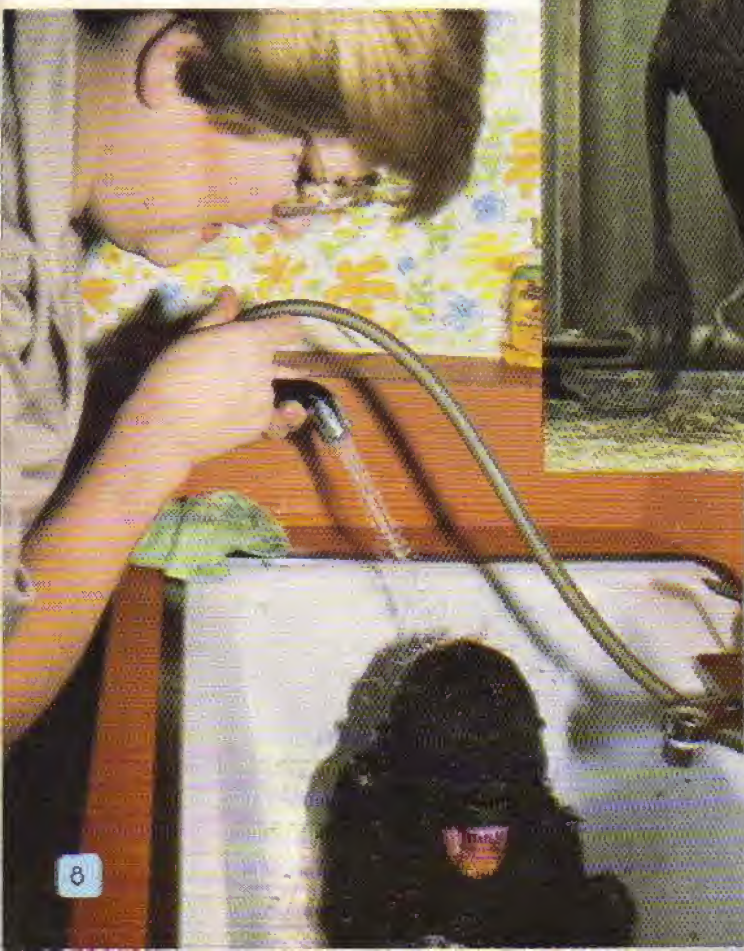




**Above:** Aunt Pitty Pat, a one-week-old anteater, in her isolette.

**Right:** Getting two-day-old Tsavo to start nursing was a "big" project.

**Below:** Gordy, the baby lowland gorilla, gets a bath.



join them," explains Peggy. "The trouble was, I think Alberta just thought she was going to visit the Wild Animal Park like everybody else!"


Wild animal babies may be adorable, but they all grow up to be—wild animals. At some point, the zoo-keepers have to put the babies back in with the grown-ups.

When the keepers put Alberta in the gorilla exhibit, Peggy remembers sadly, "she looked absolutely stunned. Then she started to scream." It took Alberta a few days to get used to the idea that she was a gorilla.

Is it hard for the zoo-keepers to give up being an animal's parent? "It's really tough when a baby you've raised gets sent to another zoo," says Tina Watson. "You can't visit it. You don't know how it's doing."

Many of the babies Tina cares for, like Josie, do stay at the San Diego Zoo. Tina can visit Josie as

often as she likes. But that doesn't necessarily make the separation any easier.

Now that Josie has gotten used to living with orangutans, Tina doesn't want to remind her of the childhood she spent with humans. So when Tina goes to visit Josie, she is careful to stay hidden in the crowd and not let the ape see her. "That's hard," says Tina, "because I always want to go right up to her and say hello." 



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# HYPNOSIS

THERE'S MORE TO IT

THAN MEETS

THE

EYE

by Eric Weiner

Emergency! A 10-year-old boy has been hit by a car. He's rushed to the hospital. The doctors are getting ready to operate. But at the last minute they discover the boy has a rare problem: Taking painkillers would make him very sick.

The doctors know they can't operate without using something to lessen the pain. So what do they do? They call in their hyp-

notist, Dr. Harold Wain. Speaking in a soft, soothing voice, Dr. Wain hypnotizes the young boy. Then he says, "Why don't you go to the movies?"

To the movies? During an operation? But the boy stops crying and closes his eyes. His hand begins to move back and forth from his lap to his mouth—as if he were eating popcorn!





**Above:** Some scientists say that hypnosis is a different kind of concentration.

"I sent the boy on an imaginary trip to his favorite movie," Dr. Wain explained to CONTACT. Dr. Wain works at the Walter Reed Army Medical Center in Washington, D.C. "In his mind," says Dr. Wain, "the boy wasn't being operated on. He was watching Superman!"

Does this sound unreal? Some people would agree with you. But more and more doctors and scientists have come to believe that hypnosis can be a useful tool for helping people.

In the U.S. today, there are more than 75,000 doctors who use hypnosis. They're using it for all kinds of reasons. They're working with athletes so that they'll play better. They're helping kids to break bad habits like nail-biting. They're hypnotizing grown-ups to help them quit dangerous habits like smoking. They're even using hypnosis to cure warts!

### Watch the Watch

You've probably seen a science-fiction movie with an evil hypnotist who dangles a shiny watch in front of his victim. "Watch the watch," murmurs the villain. "You will begin to feel very sle-e-e-py..." Soon the helpless victim is under the hypnotist's evil spell.

In real life, doctors use hypnosis to help people, not to hurt them. And most don't swing watches. They just talk.

Just by talking, hypnotists lead people into a relaxed state, called a trance. Scientists don't really know what a trance is, or how it works. But some hypnotists claim that people in trances believe what their hypnotist tells them.

Here's an example: After hypnotizing you, a hypnotist tells you that your arm is very heavy. Then the hypnotist says, "Lift your arm." You try to lift your arm, but you can't!

That's not all. Hypnotists claim that they can put a person in control of what the body normally does by itself. For instance, your skin may grow warts, without asking for your okay.

Using hypnosis, however, can sometimes change that. The Walter Reed Hospital hypnotist, Dr. Wain, tells kids to play hide and seek with their warts. "Then I say, tell the warts to run and hide. It doesn't always work, but often the warts are gone in a few days!"

Hypnosis also seems to help people control their own memory. Scientists have found that a person's brain stores more information than the person is aware of. That's why detectives have begun hiring hypnotists—to help crime witnesses remember more of what they saw.

In 1976, in Chowchilla, California, kidnappers stopped a school bus that was taking 26 kids ➡

**Below:** Most hypnotists don't use watches to hypnotize people—they just talk.



PHOTO: THE STOCK MARKET/© ART KANE

PHOTO © YOUNG/PHOTO TAKE



home from school. The kidnappers ordered the kids off the bus and into two vans. They drove off with the kids. While under hypnosis, the bus driver was able to remember the license plate numbers of the two vans. The license plate numbers led the police to the kidnappers—and the kids.

### Don't Take Any Trances!

Not all hypnotists use hypnosis to help people. Some stage magicians use hypnosis to show off. They pick people out of the audience, hypnotize them, and then make them do something silly, such as cluck like a chicken. That's no laughing matter, say hypnosis experts.

"Everyone likes the idea of hypnosis," says Dr. Erika Fromm, a hypnosis expert at the University of Chicago. "But it's absolutely not something for people to fool around with. It can be very dangerous!"

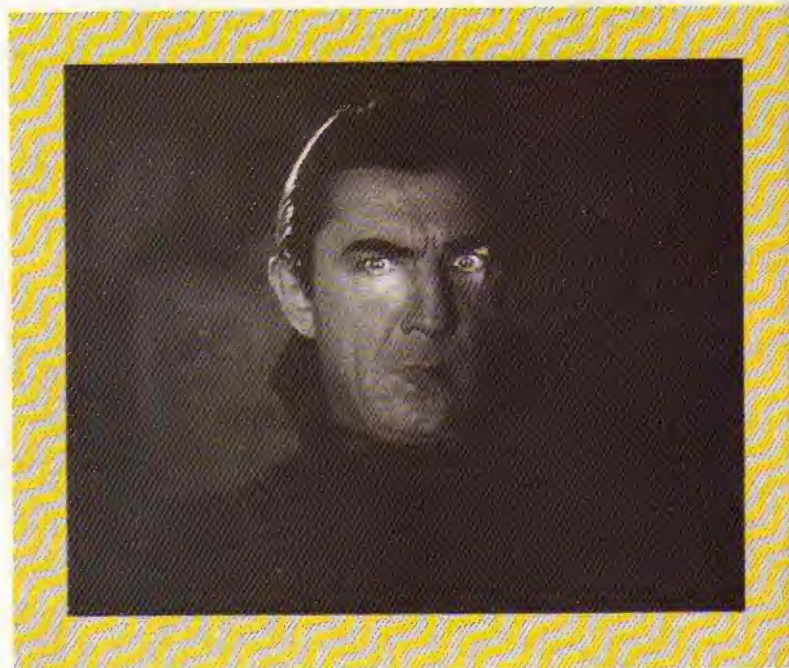
"No one should try hypnosis on their own," Bill Hoffman told CONTACT. Mr. Hoffman is vice-president of a group that helps doctors who use hypnosis. "If someone wants to go to a hypnotist, they should first find out if that hypnotist has had the proper training. Right now, a hypnotist doesn't need a license. That means there are a lot of hypnotists out there who don't really know what they're doing."

### How Does It Work?

Hypnosis isn't new. The first scientist to study trances was Friedrich Anton Mesmer. He lived

200 years ago. Mesmer thought he could hypnotize people by touching them with magnets. He was wrong. But Mesmer started a whole new field of scientific research.

Today, scientists all over the world are studying hypnosis. Dr. Fromm has found that a few people don't daydream enough to be hypnotized. Did you ever get so wrapped up in an exciting movie that you forgot you were in a movie theater? Dr. Fromm thinks that the ability to believe in fantasies and daydreams is a big part of what makes hypnosis work.



PHOTO, FOTO FANTASIES

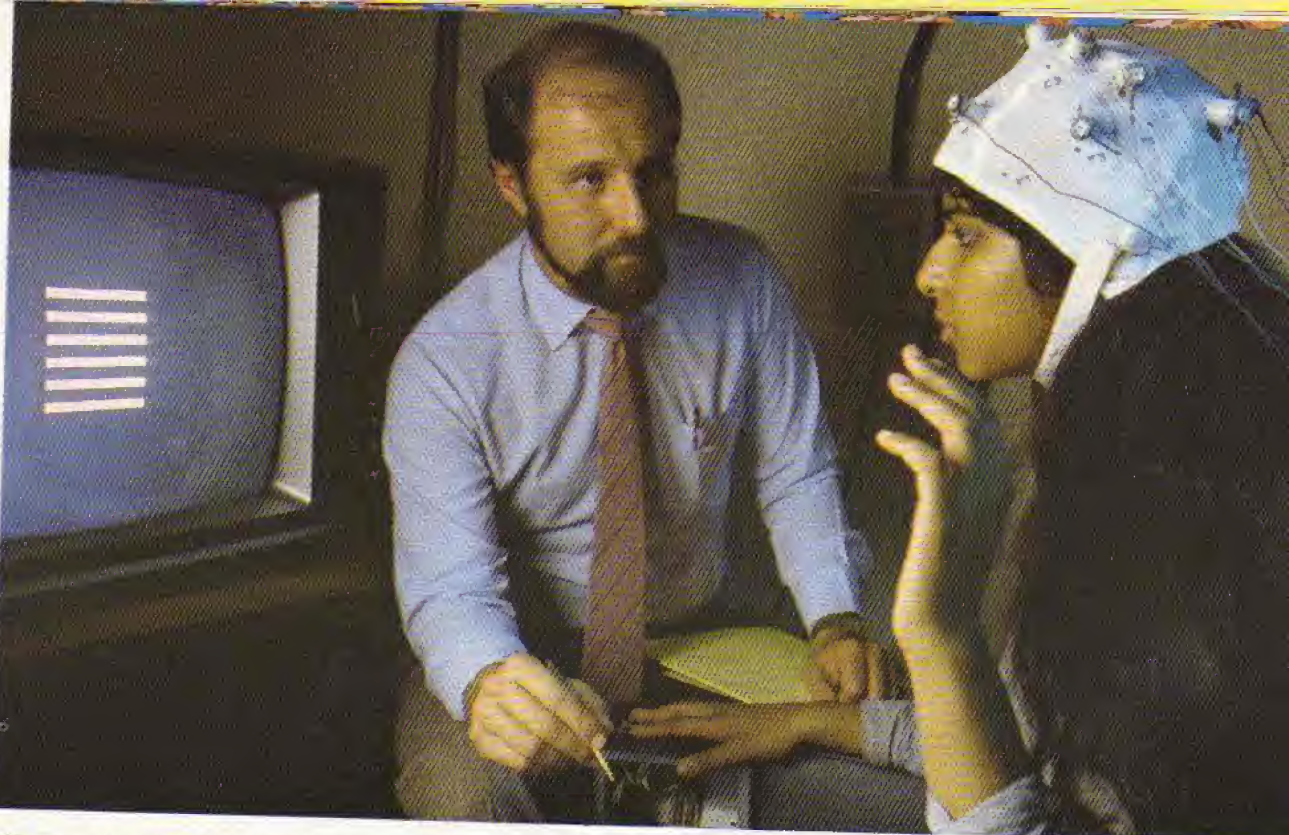
**Above:** In sci-fi movies, hypnotists are usually villains with magic powers.

**Left:** Hypnotists try to free people's imaginations. Here a doctor tells his patient that her arm will start to float up all by itself.



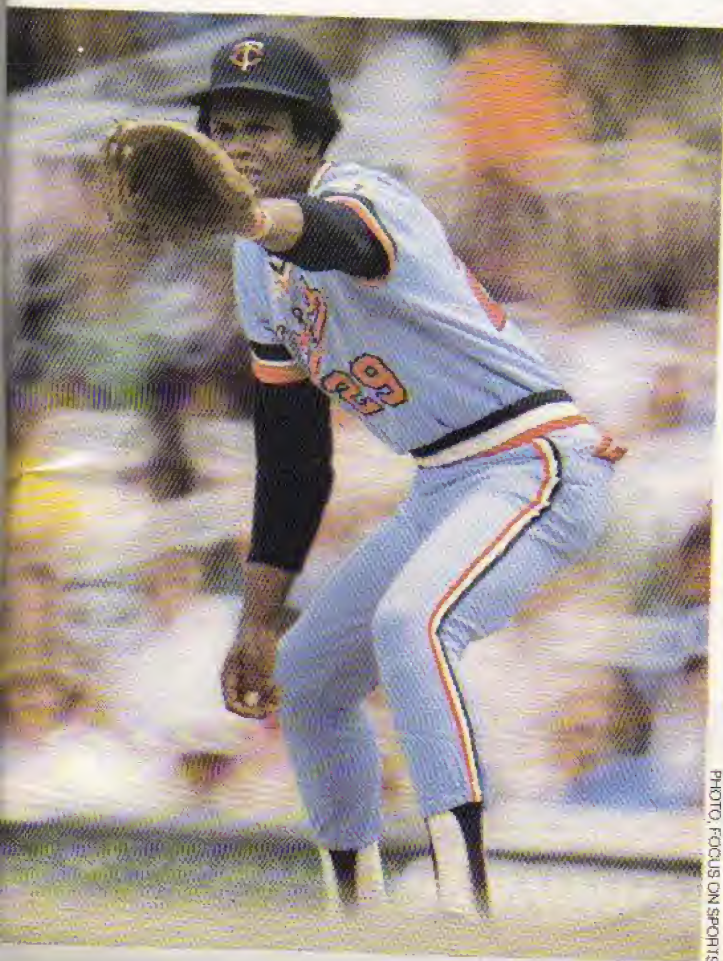
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**Above:** Dr. David Spiegel uses special equipment to study the brain waves of hypnotized people.

**Below:** Many famous athletes, like Rod Carew, use hypnosis to help them concentrate during games.



Since many kids have big imaginations, they seem to make good subjects for hypnosis. Says Dr. Fromm, "Kids from 7 to 10 are often the people who can be hypnotized most deeply."


### Is Hypnosis for Real?

Not everyone takes hypnosis seriously. Dr. Nicholas Spanos thinks hypnosis is a lot of baloney! Dr. Spanos studies hypnosis at Carleton University in Ottawa, Canada. He told CONTACT: "There is zero scientific evidence that there is any such thing as hypnosis or a trance!"

Dr. Spanos thinks that people who cluck like chickens while under hypnosis really just want to please the hypnotist. They're acting hypnotized, and showing off.

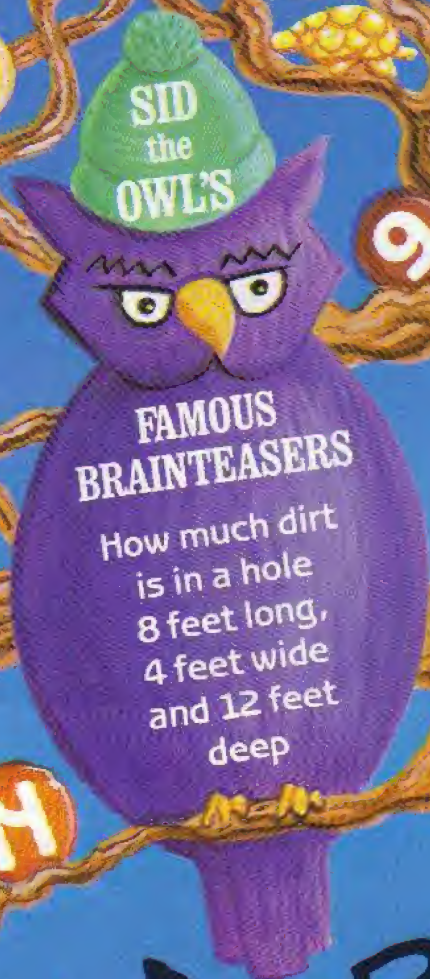
Hypnotists, of course, disagree. "Do you really think someone would pretend they weren't feeling pain during an operation?" asks Dr. Wain. "Just to please the hypnotist? No way!"

"Most operations don't hurt as much as people think," answers Dr. Spanos. "Getting the patient to think about something else may help to get their mind off what's going on. But that doesn't mean they're in a trance."

Scientists like Dr. Spanos claim to have an answer for everything that hypnotists say they can do. But so far, neither side of the hypnosis debate has been able to prove its case. In the meantime, the number of hypnotists in the U.S. has doubled in the last 10 years. Scientists may not all agree about its value, but hypnosis looks as if it's here to stay. 



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and 12 feet  
deep

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Anyone who sends in word games, etc., consents to their use and the use of his or her name in future issues of the magazine without further compensation.

Do you know any  
word games, brainteasers,  
jokes or dinosaur facts?  
Send them to Sid and Sam, along with  
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## FUN PLACES TO EAT FUN FRUITS®

- On the ski-lift going to the top of the mountain
- In the back row of the movies
- Behind a snow fort
- In the bathtub

## CRAZY WORDS

Scrambled Snow.  
Find the Hidden  
Winter Words

- 1) licice
- 2) nemitts
- 3) nawmons

## LETTERMANIA

The letters in the tree are a mess.  
Can you put them in the right order?

## FACTOSAURUS

A Compsognathus  
(komp-sog-NA-thus) was a  
dinosaur the size of a chicken.  
Because it was so small, it  
could run very fast to get away  
from its enemies.

## Smilin' Sam's Joke-O-Rama

Stop me if you've  
heard this before...

Why did the Grandmother  
put roller skates on  
her rocking chair?

**ANSWERS:**  
Sid the Owl's Famous Brain teasers: None. If there were dirt  
in it, it wouldn't be a hole  
Smilin' Sam's Joke-O-Rama: She wanted to rock and roll!  
Lettermania: WINTER TIME  
Crazy Words: 1) icicle 2) mittens 3) snowman



# Bringing Down the House

HOW EXPERTS TEAR DOWN BUILDINGS

By Ira Wolfman

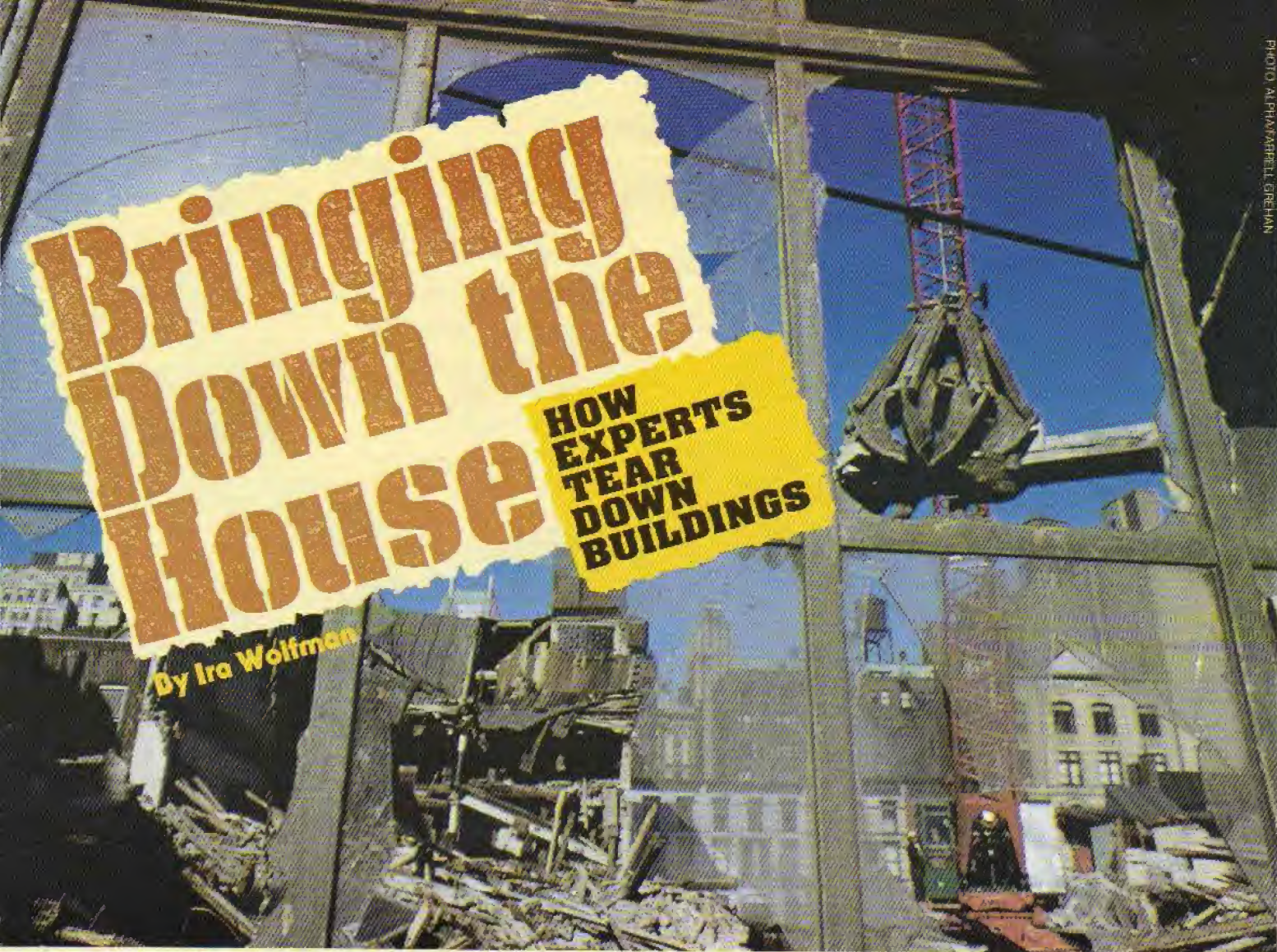


PHOTO: AL PHIVARRELL/GREHAN

Do you enjoy knocking over a row of dominoes? Are you a true believer that what goes up must come down? Do you get a charge out of taking stuff apart? If you answered yes to any of these questions, do we have a job for you!

Picture this: an enormous building stands on a city street. Its tons of concrete, brick, steel and glass sit empty. It's just waiting for someone to come and knock it down.

And if you're a wrecker—a demolition expert—that's exactly what you'll get to do!

Demolition work is difficult, and sometimes dangerous. You can't just bash down a building. You have to do it very carefully.

There are different ways of wrecking a building. Big Apple Wrecking—a company in New York City, tears down buildings step by step. Big Apple Wrecking uses a variety of methods to do the job. Its crew works with hand tools, giant cranes, bulldozers and wrecking balls.

Another system is used by people like the

Loizeaux family in Maryland. They go about demolition in a big—and loud—way. (See box.)

## The Walls Come Tumbling Down

"Tearing down a very big building may take weeks, even months," Mike Schiller told CONTACT. He is a field supervisor with Big Apple Wrecking. Mike has worked in the business for 15 years. "I make sure we have the proper permits and contracts, that the right equipment is used and that all of the safety procedures are carefully followed."

The most famous wrecking tools are the torches and drills that break through metal and concrete, the heavy ball that smashes through walls, and the tall metal crane that swings the ball. "But before any of those tools show up," said Mike, "there are a lot of other steps that have to be taken."

Every working building is alive with things you don't see, such as electricity, water and gas





PHOTO: FPG/© DAVID M. DOODY

**Left:**

How would you like to clean up this mess? A front-end loader scoops up the rubble.

**Below:**

Look out below! The claw of a crane is used to clear the wreckage.

lines. Before a building can be taken apart, these systems have to be stopped, or "capped." Otherwise, you'd see water come gushing up the minute the wreckers hit the pipes.

Next the workers seal the building. They take out all the windows and close off the entrances. One entrance to the building is kept open for workers. Workers begin moving in and out, dressed in safety outfits: safety belts, boots and hard hats. (Hard hats are extra-hard helmets.)

### And the Kitchen Sink, Too

Next, workers go through the building, looking for anything that can be resold or reused. This includes metals like copper, lead, zinc and iron. They remove other useful objects such as pipes, fireplaces, light fixtures, even windows and doors.

Now it's time to bring in the big machines. The important piece of equipment is the giant crane. It is made up of a small car (called the "cab") that's on the ground. A long metal neck (the "boom") is attached to the cab. It can reach above the roof of the building. At the top of the boom is the tip, or the "jib." A thick wire, or cable, runs from the cab to the jib.

The boom, made of lightweight steel, can swing around in a circle. It moves when the driver, sitting in the cab, pushes buttons or ➔



PHOTO: FPG/© RICHARD LARID



levers. Attached to the jib is a huge, claw-like bucket. Sometimes, instead of a bucket, a heavy iron wrecking ball is used.

### Starting at the Top

The top of the building is always torn down first. The driver will probably begin by sending the bucket—which weighs as much as five tons (10,000 pounds)—crashing down through the roof. Then the bucket may begin “biting” away at the inside walls. The crew can also use a wrecking ball to knock down the walls. If there are steel columns that can't be knocked down easily, workers go in with special torches that burn through steel.

The work proceeds, floor by floor from top to bottom. Finally, very little remains of what once was a tall building. Then a “front-end loader” is often brought in. This is a kind of bulldozer with a big shovel on the front. The loader loads (how'd you think it got its name?) all the tons of stone and steel into its shovel. The “garbage” is then dropped into dump trucks, and carried away.

Probably the most difficult job is that of the crane operator. One wrong move could drop tons of stone on people, or could send the wrecking ball the wrong way.

When all the remains of the building have been cleared, the ground is smoothed over by bulldozers. Usually a fence is put up. The land is ready for a new skyscraper!

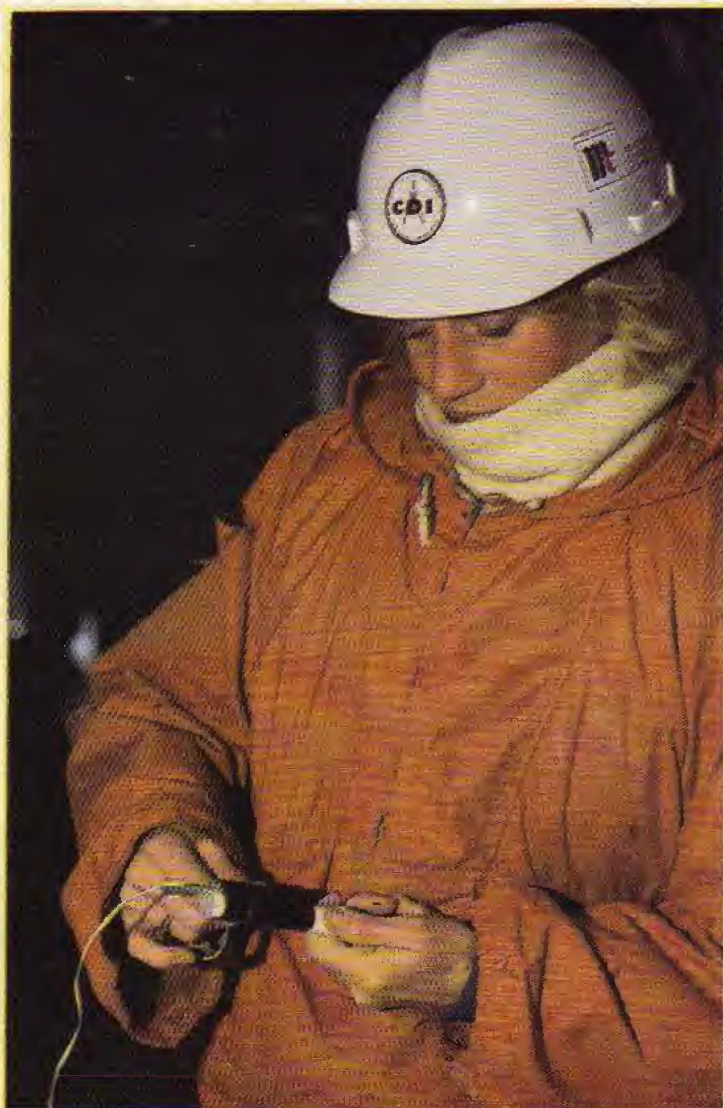


PHOTO BY JES MONCEL

**Above:** It takes steady hands to attach the blasting cap to the explosives.

**Below:** Now you see it, now you don't! When the Loizeaux family blows down a building, it happens fast.





## A Dynamite Family

"Four...three...two...one." A crowd is watching a building some distance away. An explosion is heard. At first nothing seems to happen. Then the building seems to quiver. It shakes a bit more. Then it collapses like a house of cards.

This is what demolition experts call a "blow-down." It sounds like one long explosion, but it's actually thousands of smaller ones. Welcome to the world of demolition by dynamite!

A company called Controlled Demolition Incorporated (CDI) is the world's expert in using explosives to bring down buildings. In 30 years, CDI has "taken down" more than 5,000 structures, including big buildings, huge chimneys, blast furnaces and bridges.



**Above:** Two Loizeaux brothers wire the detonator that will set off the charges.


The company was started in 1957 by Jack Loizeaux and his wife, Freddie. When their son Mark was eight years old, he helped blow up a smokestack. Today, Mark, 40, and his brother Doug, 37, run the company.

The secret of CDI's success, explains Doug, is in not using tons of dynamite. "Too much dynamite can send a building sky-high, and break windows all over town," he told CONTACT. "We try to use the smallest amount."

Instead of one giant explosion, CDI creates hundreds of small explosions—in just the right places. "If they are planned correctly," says Doug, "these small explosions will break up the supports like columns and walls that hold up the building. Then gravity does the rest of the work." The dynamite doesn't really bring the building down—it just gets the action started. Then, without anything holding it up, the building collapses onto itself.

"It's really very beautiful to watch," notes Doug, who has filmed many of the family's explosions, which he says look like "stone and steel waterfalls."

Demolition by dynamite can only be done on buildings that are at least seven stories tall. There has to be a lot of space around the building, so it can collapse without falling on buildings next to it.

In the hands of experts, wrecking a building by dynamite is safe. So many double- and triple-safety checks have been done before the first explosion is set off that even a kid can do it. "In fact," Doug told CONTACT, "my six-year-old daughter Mia recently pushed the button when we took a huge chimney down. She got a kick out of that!" (It must have been a real blast!) 





# Reviews



Video

## Harry and the Hendersons

MCA Home Video

For a really fun and funny family adventure, you might want to rent *Harry and the Hendersons* from your local video store. It's the story of a family that runs into a gigantic, hairy (and incredibly smelly) monster that bears an amazing resemblance to Bigfoot.

But the family gets more than it bargained for when it takes the

monster home. And Harry, as this "Bigfoot" is named by the Hendersons, teaches the family what being human is all about.

The beginning may scare some younger viewers, but we guarantee that Harry won't scare you for very long. He's really kind of sweet.

The video is rated PG.  
—Ellen R. Mednick



Software

## Pinball Wizard

(for IBM PC, \$35; also for the Atari ST)

If you like arcade games you'll probably enjoy this computer version of pinball. The program offers several pinball game designs, com-

plete with bumpers, kickers, roll-overs, spinners, and the kind of targets found on the real thing. The games are lots of fun.

You can use a mouse or the keyboard to control the game. The program lets you really get into the game, even "bumping" the machine as well as hitting the ball with the "flippers."

You can design your own games. The program comes with a "construction set" that gives you everything you need to create your own computer pinball games. You can design them to be as easy or difficult as you like. That makes this program good for players of many ages and skill levels.

—Phil Wiswell

Book

## Which Way Is Up?

Written by Gail Kay Haines  
(Atheneum/Macmillan Publishing Co.,  
New York, 1987, \$11.95)

How do you know which way is up or which way is down? Probably by looking up at the ceiling or by dropping a ball to the ground. But what does up or down really mean?

For scuba divers swimming in muddy waters, or mountain climbers caught in an avalanche, figuring out which way is up isn't so simple. Divers watch their bubbles. Bubbles float up. And mountain climbers spit into the snow. Saliva sinks to the ground.

We found *Which Way Is Up* gives the complete lowdown on gravity in a fascinating way.  
—ERM

Activity Book

## Make Your Own Working Camera

(Stat Publishing, San Jose, CA \$14.95)

Are you looking for something you can make that's really picture perfect? Then we recommend a snappy activity book that gives you the materials to build your own pinhole camera. And it really works! Step-by-step instructions will show you how to put the camera together. And the booklet teaches you the basics of photography. All you'll need to buy is a roll of film. One hitch: You'll probably need an adult to help you read the instructions. After that you're on your own. Ready? Say cheese!  
—Jonathan Rosenbloom



Special



Section

TUNE IN TO SQUARE ONE TV ON YOUR LOCAL PBS STATION



ILLUSTRATION BY JENNIFER DEVILL

**SOLVE THIS PUZZLE!** There are six objects on this page— and six

numbers. Can you match them up? Here's one to get you started: The

broken mirror stands for *seven* years' bad luck! **Answer on page 28.**



# SQUARE ONE WANTS TO KNOW

Square One TV reporter Donna Sabino asked some kids, "What's the best brain teaser you know?"

Can you solve their favorite stumpers? To see if you're right, check the answers on page 28.



1

**ELIZABETH EPSTEIN**

Two sisters look exactly alike and were born on the same day of the same year. They have the same parents but the kids are not twins. How can that be?



4

**JOEY NOCERINO**

A farmer had 16 horses. All but seven of them jumped over the fence and ran away. How many were left?



2

**BRIAN WALLEN**

Take one away from 19 to leave 20.  
HINT: The Romans did this all the time.



5

**DAWN SANTANA**

Two cows were in a meadow staring in opposite directions. How could they see each other without turning around?



3

**AMIRA HAMID**

Take the time to try this one. Can you make nine plus five equal two?



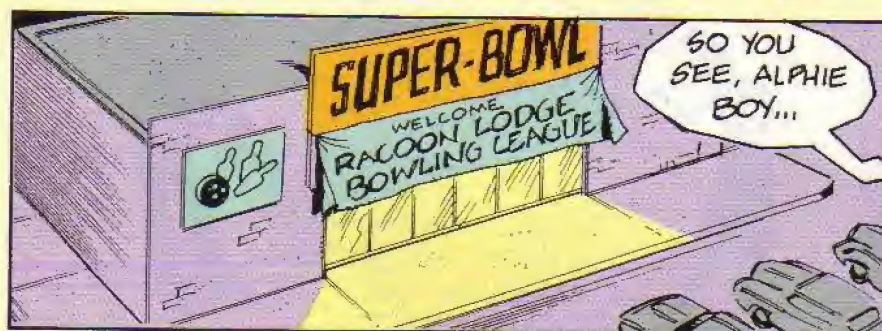
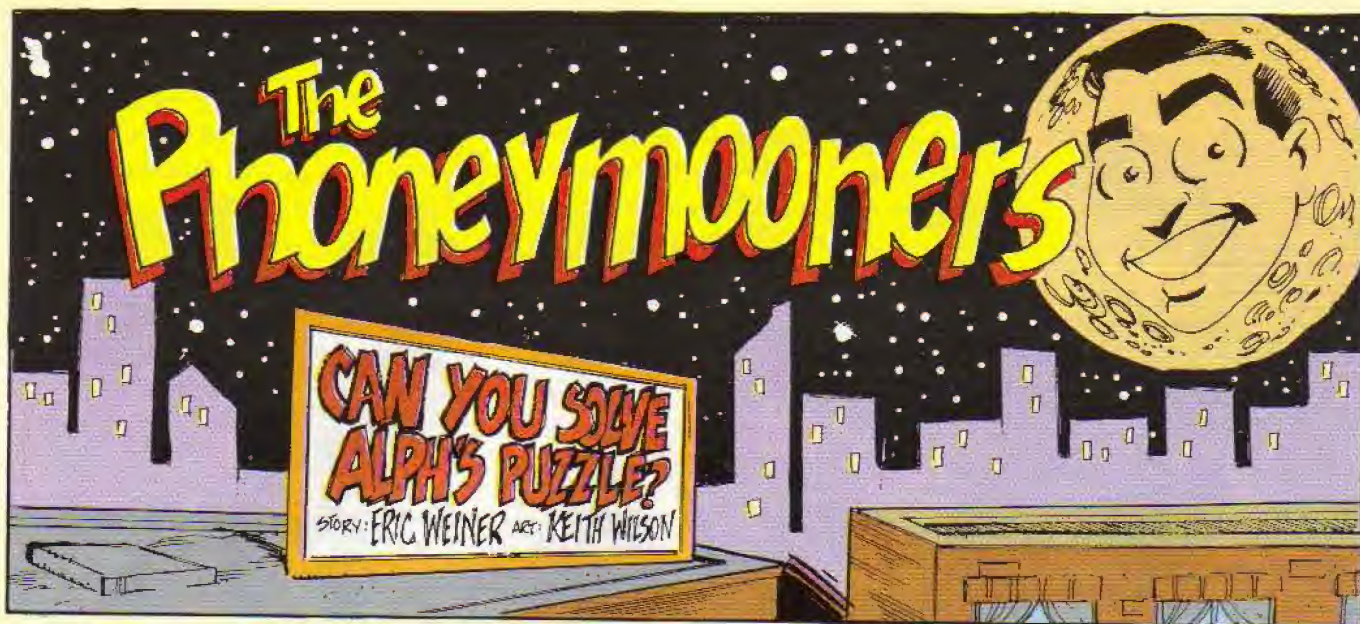
6

PHOTOGRAPH BY NICK KOUDES

**GREGORY HERBERT**

Using only nines can you write a number that equals 100? (I bet this puzzle takes you more than a fraction of a second!)





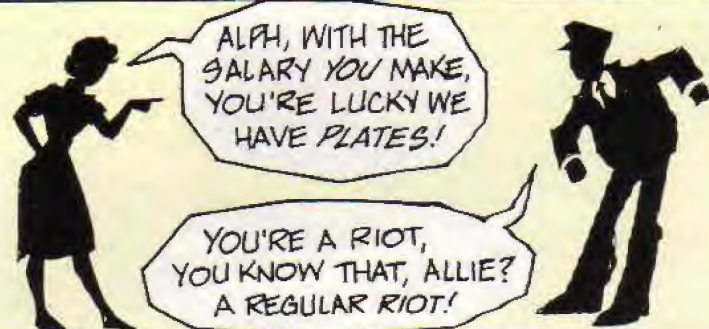
SO YOU SEE, ALPHIE BOY...



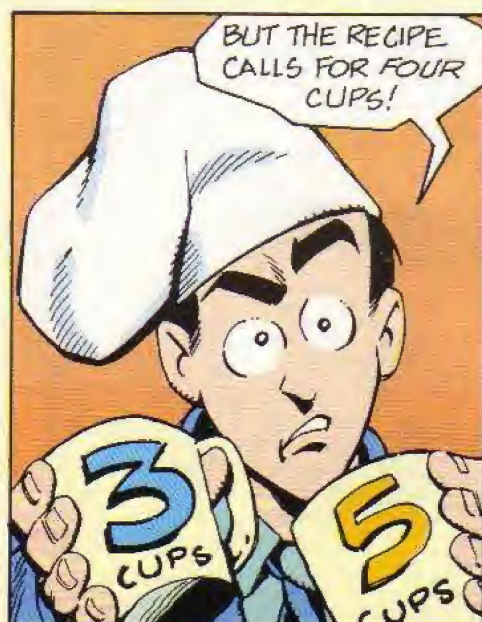
HEY, JOEY! WE HAVEN'T FINISHED THE GAME YET!











**CAN YOU FIGURE OUT THE REST OF THROCKMORTON'S PLAN? CAN YOU SEE A WAY TO MEASURE FOUR CUPS OF WATER INTO THE MIXING BOWL USING ONLY THE 3-CUP AND THE 5-CUP CONTAINER? ANSWER BELOW:**

**ANSWER:** FILL THE 5-CUP, THEN USE IT TO FILL THE 3-CUP. 5 MINUS 3 LEAVES 2 CUPS OF WATER IN THE 5-CUP CONTAINER. POUR THOSE TWO INTO THE MIXING BOWL, AND REPEAT THE PROCESS. THAT MAKES 4 CUPS. THAT'S GOOD MATH. MATHS-- AND GOOD COOKING!



# THIS MAZE IS PRIME TIME

Mathman! Mathman! Are you ready for some prime time Square One action? Then get lost in our prime number maze.

A prime number is a number that can only be divided by itself and by one. For instance, two is a prime number. But six is not.

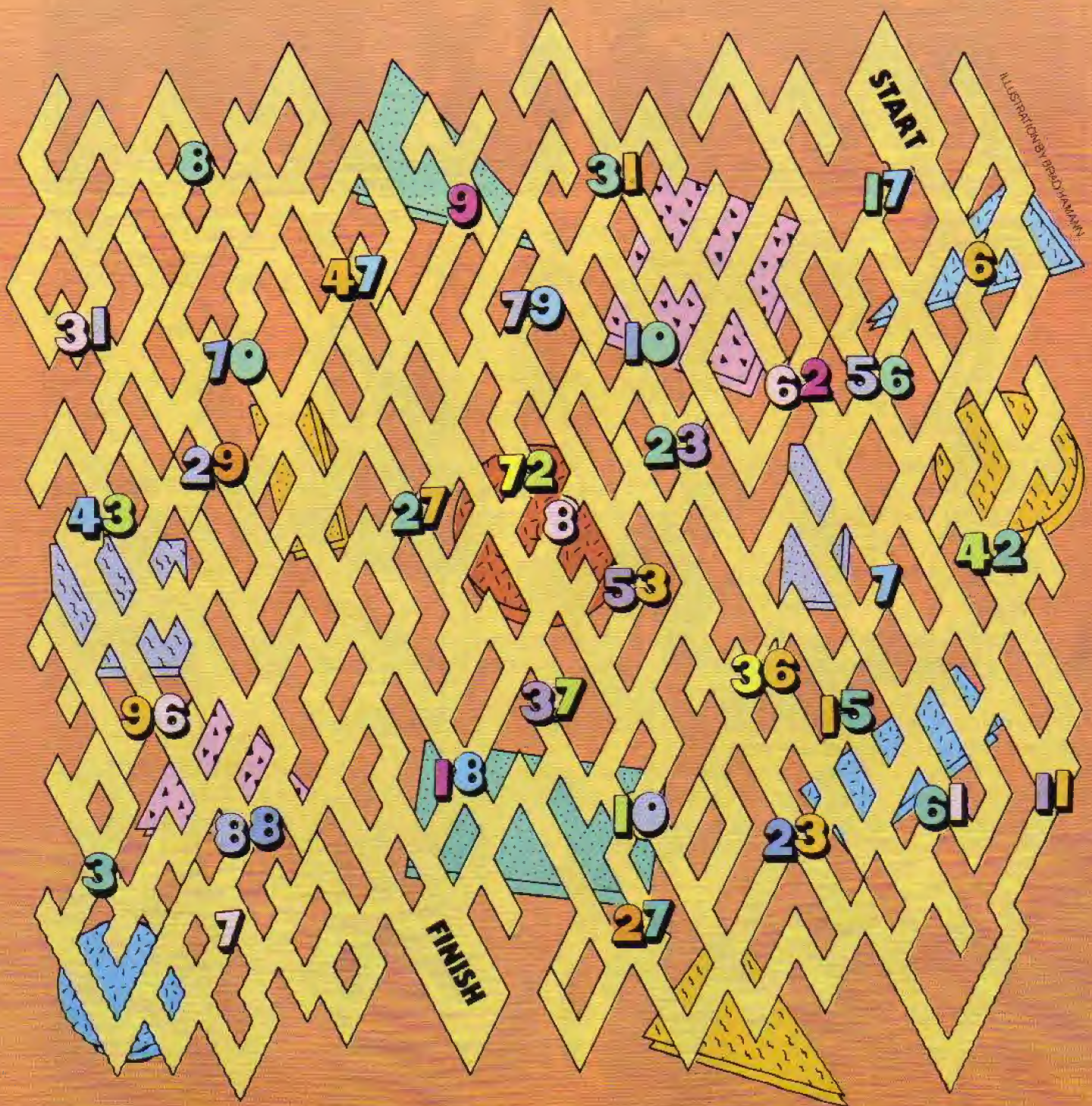
• There are several routes you can use to

get from start to finish.

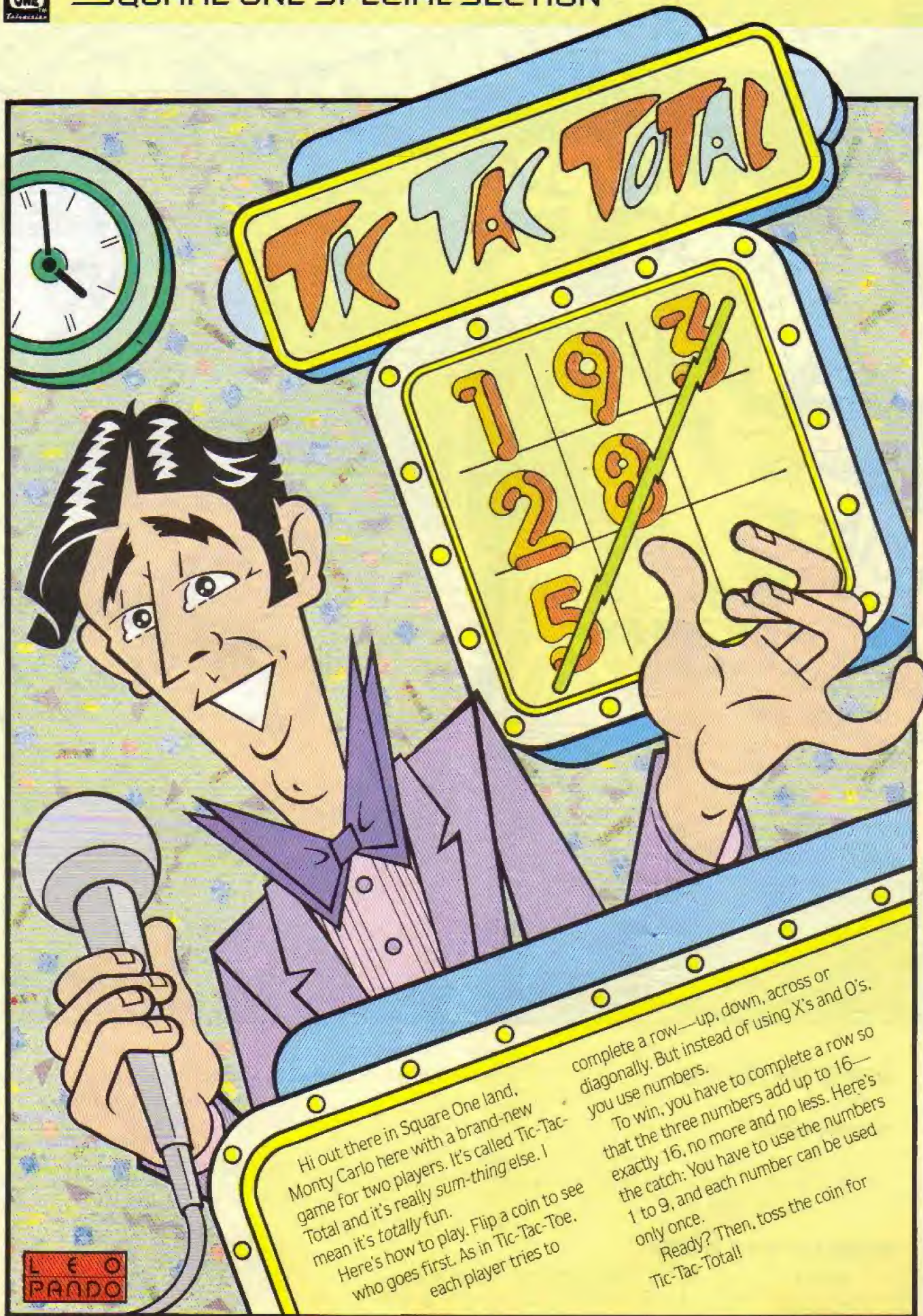
• One path takes you through only two prime numbers. If you choose other paths, you'll travel through more prime numbers. But if you hit a number that isn't prime, your path will be blocked.

See how many prime paths you can find to get you from start to finish.

Answer on page 28.









Fold in to find out what's wrong with this ad (the answer has to do with scale).

Fold in like this—



**NUTTY NORM**

**BIKE SALE!**

**ONLY \$1.00**

**SPECIAL**  
BIKE IS SO GREAT, 1/4" REPRESENTS 20" OF YOUR AVERAGE BIKE!!

**ENORMOUS PRICE SLASH!**

**ACT NOW TO GET THIS UNUSUAL SUPER BIKE! WHAT A PRIZE!**

ILLUSTRATION BY DEAN HICKLE

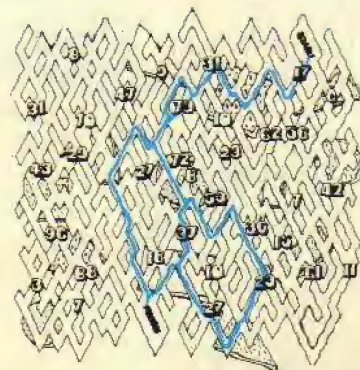
## SQUARE ONE ANSWERS

### NUMBER MATCH

1—Square One TV, 2—A bicycle built for two, 3—Three blind mice, 4—Four-leaf clover, 7—Seven years bad luck, 9—Cat with nine lives.

### SQUARE ONE WANTS TO KNOW

ANSWERS: 1. They are part of triplets. 2. XIX—I=XX. 3. 9 a.m. + 5 hours = 2 p.m. 4. 7. 5. They are facing each other. 6. 99%.



**MATHMAN MAZE**



# THE BLOODHOUND GANG

## The Case of the Record Rip-off

by Becky Cheston



**W**ow! This fried rice smells delicious!" exclaimed Vikki, as she unpacked a bag of takeout food.

School was out for a Thursday teacher's conference, and the Bloodhound Gang was in their office. They were celebrating the occasion with a Chinese food feast.

"Pass the egg rolls," said Skip. "And the sweet and sour pork, and..."

"The Spoons!" shouted Ricardo.

"You mean the chopsticks," replied Vikki, handing Ricardo a pair.

"Not the spoons," he said. "The Spoons! Their lead singer is right down there—crossing the street!"

The Spoons was a hot local rock band with a number one single. "You mean Shane Diamond's out there?" said Vikki.

"No, I'm right here." The rock star was standing in the office!

For a moment, Vikki, Skip and Ricardo were speechless. Then, Skip broke the ice. "Care for a dumpling?" he asked nervously.

"Thanks, but I'd rather have your help," replied Diamond. "Our new album is way behind schedule. If we miss our deadline, we'll lose our contract!"

"But we're not musicians," said Vikki. "How can we possibly help?"

"I don't need musicians—I need detectives!" Shane explained. "Our recording sessions are

being wrecked. Someone is out to ruin us!"

## Rock and Wreck

**R**A bit later, the Bloodhound Gang was standing in the control booth of SuperSounds, a sleek state-of-the-art recording studio.

After shaking hands with the rest of the members of The Spoons, the detectives met Sammy Green, the group's producer, and Roberta Daly, a sound engineer.

"And who is this?" asked Vikki, bending down to pet an enormous orange tabby cat.

"That's our mascot, Solid Gold—Goldie, for short," said Shane. "We named him after our last album," he added, pointing to a shiny framed disc mounted on the wall.

Something underneath the album caught Ricardo's eye. "What's that?" he asked. It wasn't a pretty sight. On the floor lay a large roll of recording tape, twisted and ripped to shreds.

"That was our master tape," said Shane sadly. "That's the tape they make the records from. There were already three songs on it—it took weeks of work! And it was the only copy."

"How did it happen?" asked Skip.

"Ask Roberta," said Green. "She was there last night when it happened."

"I'm not really a witness," said Roberta. "Oh. I was here in the room, but the lights were out. There was a lot of yelling and screaming. All



I know is that when the lights came on again, the tape was lying there ruined!"

"Since we don't have any clues," said Vikki, "why don't we start with motive. Who stands to gain if your recording contract falls through?"

"Well, there's Red Licorice," Shane replied.

"Red licorice?" said Skip. "How could candy ruin The Spoons?"

"I think he's talking about Red Licorice—the rock band," said Ricardo.

"Aren't they sort of rivals of yours?" Vikki asked Shane.

"Yes," Shane replied. "Their founder, Red Patterson, used to be our lead guitarist. There were some hard feelings when he left."

"What about Gene Harbor—from Harbor Records?" asked Roberta.

"Now there's a possibility," said Shane. "Harbor wasn't exactly thrilled when we signed on with his competition—Roland Records."

"I don't think we need to worry about any more damage," said Green. "I've had security beefed up since yesterday. It'll be impossible for anyone to get into the studio now."

"I wish that were true." It was one of the security guards. "I think someone just slipped past me into the building!"

## **T**he Spoons Croon

The mood was tense at SuperSounds. While security guards searched for the intruder, The Spoons rehearsed a new song.

Suddenly, the studio was plunged into darkness.

"Not again!" groaned Shane.

"Calm down, everybody!" said Sammy Green.

"I hit the light switch by mistake."

"That explains the lights," said Shane. "But what about this?" He held up a black beret.

"That's Red Patterson's!" Roberta exclaimed.

"Then Red's in the building somewhere!" cried Shane. "This is a repeat of last night!"

"That's it!" said Skip. "I've figured out how to get to the bottom of this. We recreate what happened last night."

"You mean, we act it out?" asked Shane.

"Not all of us," said Skip. "Just Roberta. We'll have her relive it—in her mind!"

"Dr. Croft!" exclaimed Vikki and Ricardo.

"Dr. Croft?" said Green. "Isn't she the famous

hypnotist? I thought that hypnotism stuff was a bunch of baloney."

"Not at all," said Vikki. "Hypnosis simply produces a change in a person's state of mind."

"People go to hypnotists for all kinds of problems—like losing weight, or stopping smoking, or curing fears like a fear of heights," explained Ricardo.

"But I don't have any of those problems," said Roberta.

"You can cure amnesia with hypnosis, too," said Skip.

"Look," said Roberta. "It's not like I forgot what happened when the tape was destroyed. Things were just too confused for me to realize what was going on."

"That's where Dr. Croft comes in," said Vikki. "Under hypnosis, your mind will be more sharply focused. Maybe you'll think of some clue or detail that you can't remember now."

"Well, I'm willing to give it a try," said Roberta.

Vikki went to call Dr. Croft. Everyone else stayed in the studio, spending an hour trying to figure out what had happened.

All of a sudden there was a commotion in the hallway. "I've got him!" yelled a security guard, and dragged a tall young man into the sound booth.

"Red Patterson!" Shane exclaimed.

"So you're the intruder!" said Green.

"Wait a second," replied Patterson, trying to squirm out of the guard's grasp. "I can explain!"

Just then a woman entered. "Here I am," she said. "Not too late, I hope?"



ILLUSTRATIONS BY BOB PEPPER





"It's Dr. Croft," said Vikki, introducing everyone to the famous hypnotist.

"Well," said Dr. Croft to Roberta, after hearing about last night's incident, "shall we begin?"

## Thanks For The Memories

Dr. Croft spoke to Roberta gently. "Now Roberta, you're standing in this room, just moments before the master tape is to be destroyed. What are you doing?"

"Looking at my clipboard," said Roberta drowsily. "I'm checking to see if everything's set for the next recording session."

"Look at the door," said Croft. "Is it open or closed?"

"Closed," said Roberta. "No wait—it's open just a crack. Hey! The lights just went out!"

"What's going on?" asked the hypnotist.

"I can't see anything," said Roberta. "But everybody's yelling."

"What are they saying?" asked Croft.

"This is just great," That's Shane. "Who turned out the lights?" That's Sam. "Does this mean we get to go home now?" That's the drummer—oh no!"

"What is it?" asked the doctor.

"Someone's in the room with me," Roberta whispered. "I felt him breeze past me. I'm afraid to move! There's a clanging sound, and some ripping and tearing. Oh! There's a crashing noise."

"Is the person still in the room with you?" asked Croft.

"I just felt him move past me towards the

door," said Roberta.

"Can you tell me anything about him?" asked Croft carefully.

"It's too dark," said Roberta. "I can feel a fur coat brushing past me."

"Very good!" said Dr. Croft. "The lights are on again now. Look at the door."

"It's still open just a crack," said Roberta.

"I hope this helps," said Dr. Croft after she'd brought Roberta out of the trance.

"It certainly does!" said Vikki.

"First of all," explained Ricardo, "we've just learned from the electric company that last night, this block had a seven-minute power failure."

"You mean whoever destroyed the tape didn't shut off the lights?" asked Shane.

"Now, does this guy look like he could flick a light switch?" said Skip. He was holding the orange tabby cat.

"Goldie!" said Shane. "You mean to tell me that our mascot was using the master tape for a ball of yarn?"

"That explains why I felt fur!" exclaimed Roberta.

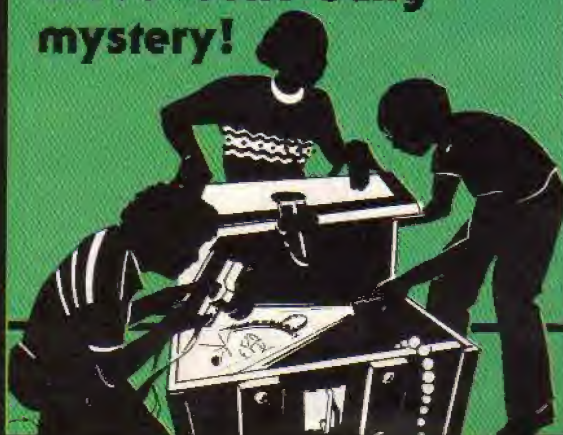
"And why the door remained open just a crack after the intruder left!" said Dr. Croft.

Green interrupted. "Wait a minute. If what happened last night was all an unfortunate accident, can you explain why Red Patterson snuck in here today?"

"I just wanted to hear The Spoons' new album," said Red sheepishly.

"Now that," said Skip, "is what I call a sneak preview!"

## Watch for next month's Bloodhound Gang mystery!





# Any Questions?

## How do you get dark circles under your eyes?

Did you ever wake up from a restless night and find dark rings below your eyes? They are telling you something you already know. You didn't sleep well last night.

Below your eyes are hundreds of tiny blood vessels in the skin. When you are well, these vessels help drain blood from the top of your head. But when you are tired or sick, your blood circulation can slow down. This causes the blood vessels to swell up. The skin under your eyes is extremely thin. It can be even thinner on some people than others. When the blood vessels swell, you see right through this thin skin. The darkness you see is actually blood.

You can also get puffy eyes from a cold or allergy. Mucus builds up around your eyes and nose. That also causes swelling. Once again, those dark circles appear.

Question sent in by Wayne Smith, Lexington, NC.



## Why are moths attracted to light?

Picture a boat in a fog. When a lighthouse beam comes into view, the sailor uses the light to steer the boat. He may not know where the light is on the land. But he does know that land is near. Some people think that moths like light because it helps them navigate out of the underbrush. Most moths fly only at night. The light of the moon and stars helps them steer in the dark like the lighthouse helps the sailor in fog.

Moths have antennae which are sensitive to light. Streetlamps and spotlights create a problem. They are closer to the ground than the natural lights in the sky. A moth may "see" the light made by, say, a spotlight by your house. But rather than steer by it, the moth will probably fly right into the light by mistake. Moths aren't used to flying out of the darkness. Light confuses them, and causes them to flit around the bulb. You might say it drives them buggy!

Question sent in by Jennifer Valentino, Milan, Italy.





Do you have a question that no one seems able to answer? Why not ask us? Send your question, along with your name, address, and age, to:

Any Questions?  
3-2-1 CONTACT  
P.O. Box 40  
Vernon, NJ 07462

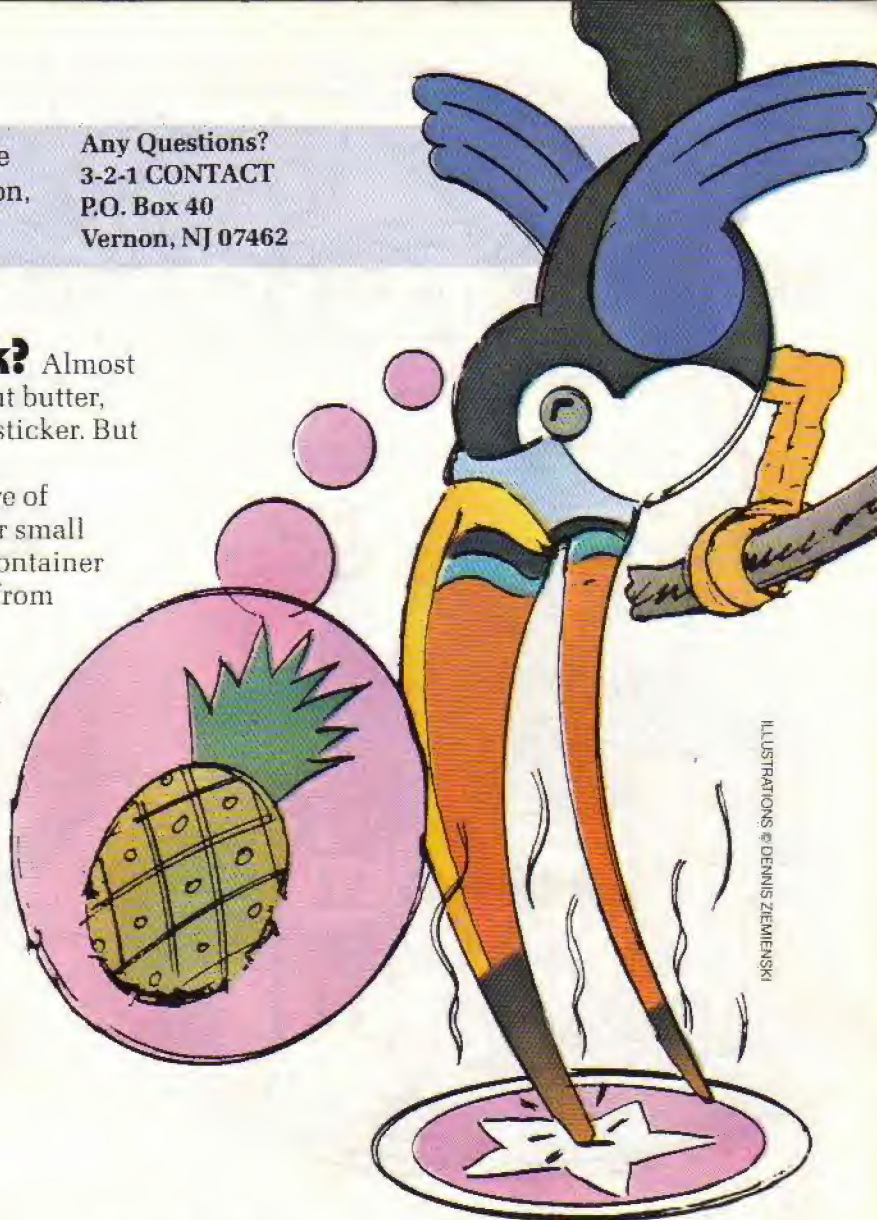
**How do smelly stickers work?** Almost any smell you can think of, from pizza to peanut butter, can be captured and put on a scratch and sniff sticker. But there's more to them than meets the nose!

Take a look at a sticker. All you see is a picture of something. But hundreds of *thousands* of super small capsules are glued to that sticker. Inside each container is a little bit of fragrance. The smell may come from the actual object. Or it may be made in the laboratory using special chemicals.

When you scratch the sticker you break open some of the containers. That releases the smell. But don't scratch too hard. You only need to open a few capsules. That way your sticker will last a lot longer.

Some smells can't be captured. So far, they can't put the smell of a hamburger on a sticker. But wouldn't you rather smell the real thing...just before you bite into a double cheeseburger?

Question sent in by Trevor and Whitney Richardson.



ILLUSTRATIONS © DENNIS ZIEMENSKI

**How do they get stripes in toothpaste?** Only your toothpaste knows for sure! Actually, toothpaste makers are very secretive. They don't like to talk about the special machines that put stripes in paste. But with a little investigating, you might find some of the clues at the end of your brush.

Suppose you could peel off the plastic tube around striped toothpaste. You would find a lot of chalky white paste. You would also find four colored lines of gel. They run down the outside of the paste. If you looked closely you would notice that these lines of gel were very shallow.

Toothpaste looks solid, but it is a very thick, sticky liquid. The stickiness keeps the colored gel from running together with the paste. When you squeeze a tube, white paste comes out. It pulls just enough gel along. So you see stripes on your brush. And that's the whole tooth...er, truth.

Question sent in by Heather Bloom, Pasadena, CA.

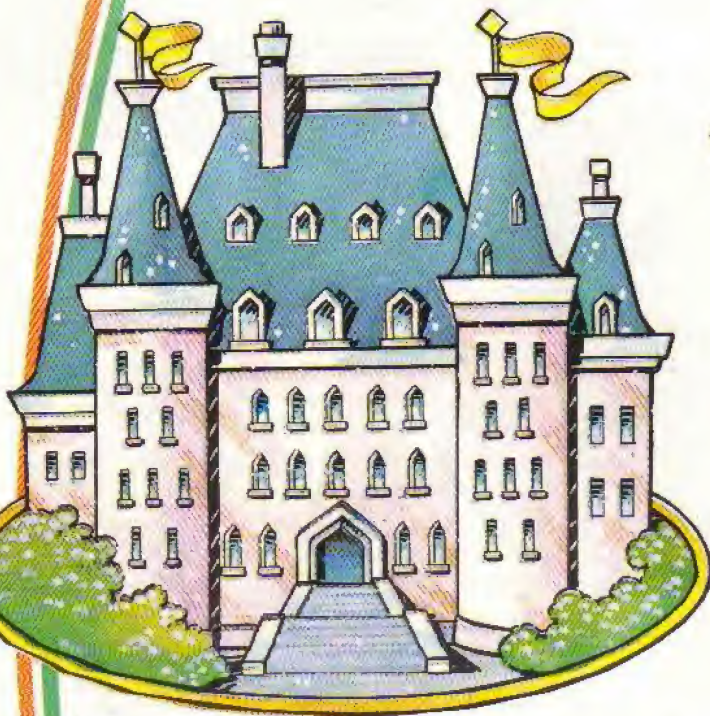




# Factoids

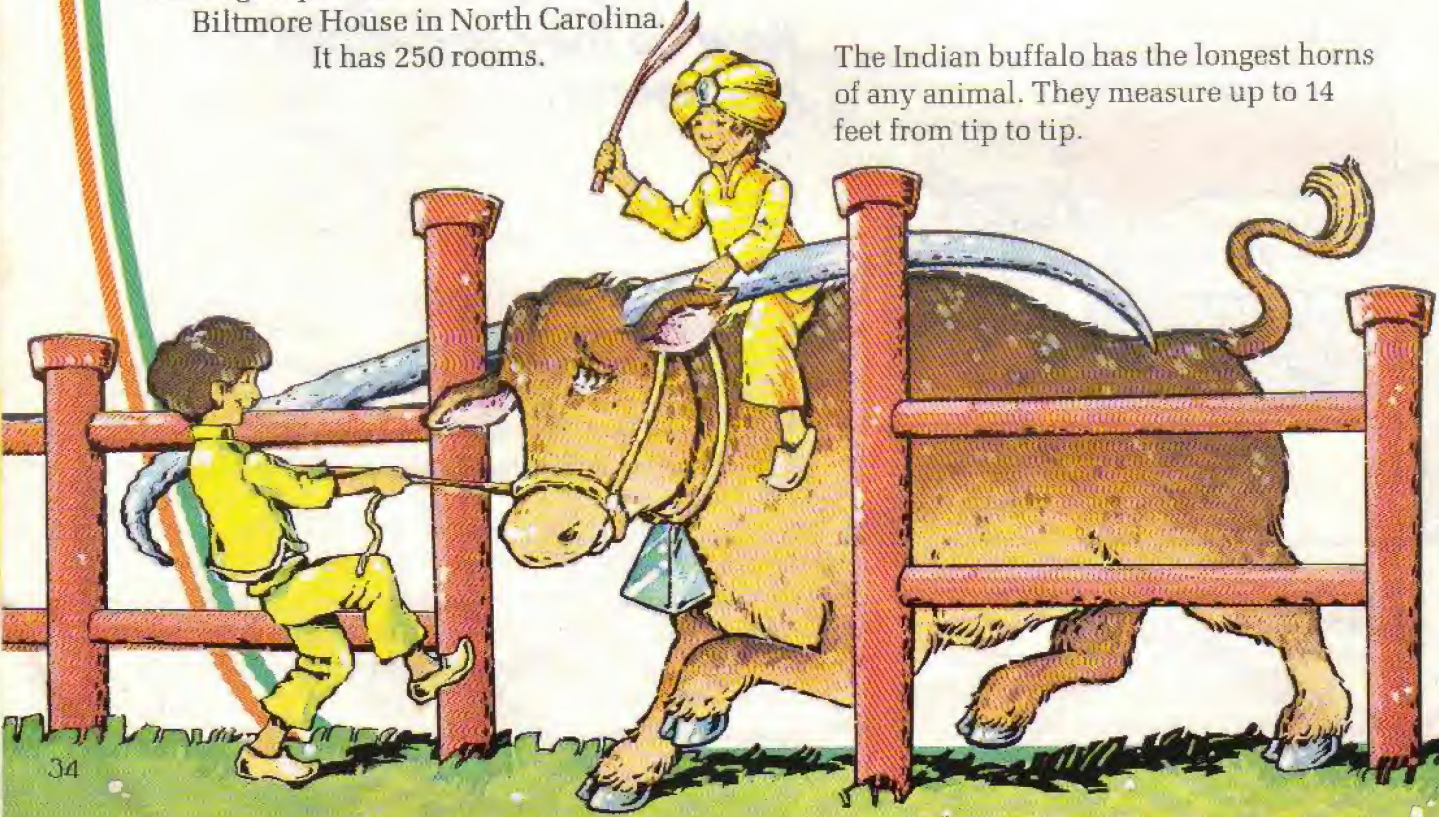


The first United States post card was issued on May 1, 1873.



The largest private house in the U.S. is the Biltmore House in North Carolina. It has 250 rooms.

The Indian buffalo has the longest horns of any animal. They measure up to 14 feet from tip to tip.







Each of your feet hits the ground about 7,000 times a day.

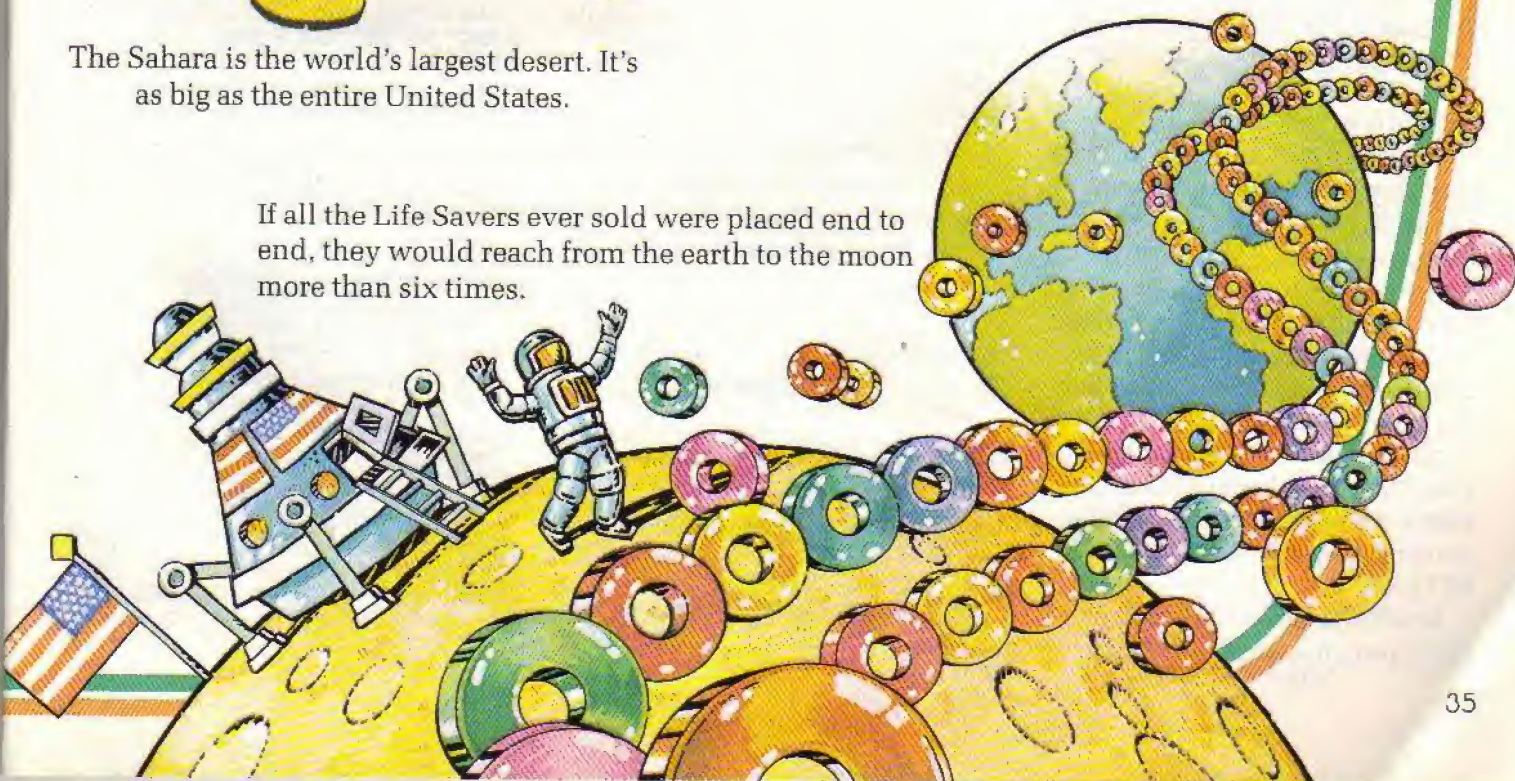


The Sahara is the world's largest desert. It's as big as the entire United States.



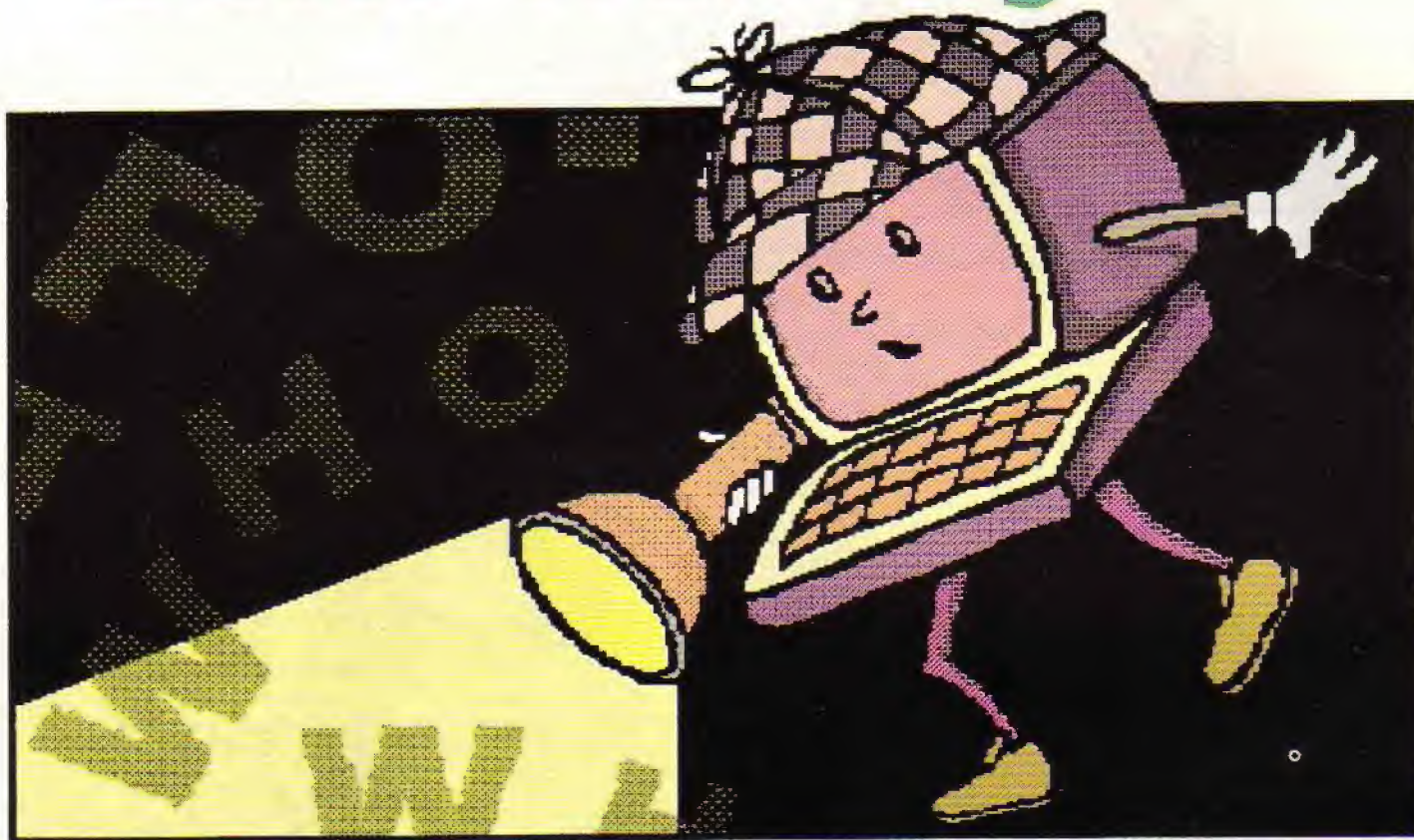
A common flea lives for about two and a half years.

If all the Life Savers ever sold were placed end to end, they would reach from the earth to the moon more than six times.





# Basic Training



ILLUSTRATIONS BY MARTIN LEMELMAN

## Word Searcher

If you've been searching for a program to help with those pesky word search puzzles, search no more! This handy-dandy program will find hidden words faster than you can say "tisierew" (That's "where is it," backwards.)

You'll still have a little bit of work to do, however. Before the program can solve your word search, you have to type it in. At the start, the program will ask you how many lines long the puzzle is. Then it asks you to type in one line at a time.

Then the program will show you the whole puzzle and ask you to check mistakes. If you find any, press the letter M, hit RETURN and follow the instructions. If your puzzle is mistake-free, then just press RETURN.

Now the puzzle solving begins. Just type in the word you want to

find, and in a second or two your computer will show you where it is in the puzzle. Keep going until you've found every word. When you're done, press E and hit return.

The program is written for Apple II computers. Following it are instructions for adapting it to IBM and Commodore machines.

Thanks to **Albert M. Huntington**, 14, of Pleasant Hill, Oregon, for sending us this program. We searched all over and we couldn't find one that was more fun!

### Apple II

```
10 DIM A$(20)
20 HOME
30 PRINT "WORD SEARCHER"
40 INPUT "NUMBER OF LINES IN
  PUZZLE (1-20)";L
50 FOR I = 1 TO L
60 PRINT "ENTER LINE#";I
```

```
70 INPUT A$(I): NEXT I
80 HOME
90 GOSUB 540
100 INPUT "IF YOU MADE A
  MISTAKE, PLEASE PRESS M";M$
110 IF M$ = "M" THEN GOSUB 570
120 HOME:GOSUB 540
130 PRINT
140 INPUT "WHICH WORD
  SHALL I LOOK FOR?
  (TYPE E TO END)";W$
150 IF W$ = "E" THEN 530
160 S = LEN(W$):F$ = LEFT$(W$,1)
170 T$ = MID$(W$,2,1)
180 FOR Y = 1 TO L
190 FOR X = 1 TO LEN(A$(Y))
200 G$ = MID$(A$(Y),X,1)
210 IF G$ = F$ THEN 260
220 NEXT X:NEXT Y
230 PRINT "WORD NOT IN PUZZLE"
240 FOR DE = 1 TO 2500: NEXT DE
250 GOTO 120
260 SX = X:SY = Y
270 FOR BX = SX - 1 TO SX + 1
280 FOR BY = SY - 1 TO SY + 1
290 IF BX < 1 OR BX > LEN(A$(BY))
  THEN 330
300 IF BY < 1 OR BY > L THEN 330
```



```

310 E$ = MID$(A$(BY),BX,1)
320 IF E$ = T$ THEN 350
330 NEXT BY:NEXT BX
340 GOTO 220
350 DX = BX - X:DY = BY - Y
360 CX = X:CY = Y
370 FOR I = 1 TO S
380 IF CX < 1 OR CX > LEN(A$(CY))
    THEN 330
390 IF CY < 1 OR CY > L THEN 330
400 IF MID$(W$,I,1) <> MID$(A$(CY),CX,1) THEN 330
410 CX = CX + DX:CY = CY + DY
420 NEXT I
430 HOME
440 GOSUB 540
450 INVERSE
460 FOR I = 1 TO S
470 VTAB SY:HTAB SX
480 PRINT MID$(W$,I,1);
490 SY = SY + DY: SX = SX + DX
500 NEXT I
510 FOR DE = 1 TO 4000: NEXT DE
520 NORMAL:GOTO 120
530 END
540 FOR I = 1 TO L
550 PRINT A$(I):NEXT I
560 RETURN
570 INPUT "WHAT LINE IS THE MIS-
    TAKE IN?";M
580 M$ = "":PRINT:PRINT A$(M)
590 PRINT "ENTER THE CORRECT
    LINE"
600 PRINT:INPUT A$(M)
610 PRINT:GOSUB 540
620 INPUT "IF THERE ARE STILL
    MISTAKES IN THE PUZZLE,
    PLEASE PRESS M";M$
630 IF M$ = "M" THEN 570
640 RETURN

```

### IBM PCjr and IBM with color graphics card.

Use the Apple II version. Change these lines:

```

20 CLS
80 CLS
120 CLS:GOSUB 540
430 CLS
450 COLOR 31
470 LOCATE SY,SX,0
520 COLOR 7,0:GOTO 120

```

### Commodore 64/128

Use the Apple II program. Delete line 500. Add or change these lines:

```

5 POKE 53281,7:POKE 53280,7
20 PRINT CHR$(147)
80 PRINT CHR$(147)
120 PRINT CHR$(147):GOSUB 540
430 PRINT CHR$(147)
450 P=55295+SX+(SY*40)
460 FOR I=1 TO S
470 FOR P,1
480 P=P+DX+(DY*40)
490 NEXT I
520 120
READY.

```

### Night Storm

Atari 400/800 XL

This program is perfect for telling ghost stories or for any time you need a dark and stormy night—even if it's a bright and sunny day. Believe it or not, it recreates a tremendous storm complete with rain, thunder and lightning. And the best part is you can't get wet!

"Night Storm" was written in a flash by **David Jarzembksi** of Chicago, Illinois.

```

140 GOTO 40
150 X = INT(RND(0)*140)
160 Y = INT(RND(0)*26) + 4
170 COLOR 1
180 PLOT X,0:DRAWTO
    X + 3,Y
190 DRAWTO X + 5,Y-3:
    DRAWTO X + 8,Y*Z
200 DRAWTO X + 10,Y*Z-Z:
    DRAWTO X + 13,Y*3
210 FOR W = 0 TO 16
220 SETCOLOR 4,0,W
230 NEXT W
240 FOR W = 15 TO 0 STEP -1
250 SETCOLOR 4,0,W
260 NEXT W
270 GRAPHICS 7 + 16
280 SETCOLOR 2,0,0:RETURN
290 FOR V = 0 TO 14 STEP +3
300 SOUND 0,RND(0)*255,4,V
310 SOUND 1,RND(0)*255,0,V
320 NEXT V
330 FOR V = 14 TO 0 STEP -0.2
340 SOUND 0,RND(0)*255,4,V
350 SOUND 1,RND(0)*255,0,V
360 NEXT V
370 RETURN

```

### Correction

In our September issue, the last line was missing from the program called "Animal." The line is:

800 END

### Send Us Your Programs

If you've written a program you'd like us to print, send it in. Include a note telling us your name, address, age, T-shirt size and type of computer. If we like it, we'll print it and send you \$25.

All programs must be your own original work. We cannot return programs. Please do not send disks.

Send your program to:

**Basic Training**  
**3-2-1 CONTACT Magazine**  
**1 Lincoln Plaza**  
**New York, N.Y. 10023**

```

10 GRAPHICS 7 + 16
20 SETCOLOR 2,0,0
30 SOUND 2,0,0,2
40 COLOR 3:FOR T = 1 TO 30
50 X = RND(0)*140:Y = RND(0)*80
60 PLOT X, Y: DRAWTO X + 5, Y + 5
70 NEXT T
80 FOR T = 1 TO
    INT(RND(0)*500 + 100)
90 NEXT T
100 GOSUB 150
110 FOR T = 1 TO INT(RND
    (0)*200 + 50)
120 NEXT T
130 GOSUB 290

```



# Extra!

by Ellen R. Mednick

The March winds are blowing, so hang on to your pencils—and your hats—and get set for some Extra! fun.

## Zoo Search

How many zoo animals can you find hidden in this word search? The names of the animals go across, backwards, up, down or diagonally. When you're finished, the leftover letters will spell out the answer to this riddle:

## Why is it hard for leopards to hide?

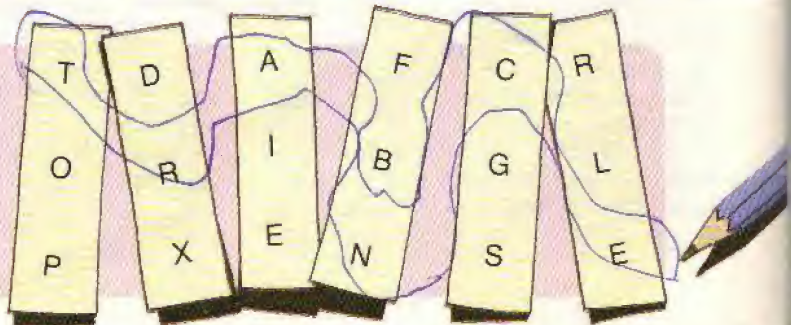
ELEPHANTS	BOAR
KANGAROOS	WOLF
RHINOCEROS	ALLIGATOR
ANTELOPE	GIRAFFE
KOALA	SEALS
MONKEY	
CAMEL	
TIGERS	
JAGUAR	
BEAR	
BIRD	
ZEBRA	
SNAKE	
GORILLA	
DEER	
PANDA	
LIONS	



D B S O O R A G N A K E  
 E E R A E B I A S J C A  
 L E E G O R I L L A S R  
 E P U R A S E L A G R H  
 P O T F H B E I E U E I  
 H L F Y I P O G S A G N  
 A E A R A F A A R R I O  
 N T D N A E L T R C T C  
 T N D R E K A O A A L E  
 S A B W A A O R W M Y R  
 S E S M O N K E Y E P O  
 Z O T T E S N O I L D S

## Mental Message

Move the strips of letters up and down until you can read a six letter word across. Hint: The word will spell out a sleepy state that hypnotists can lead people into.



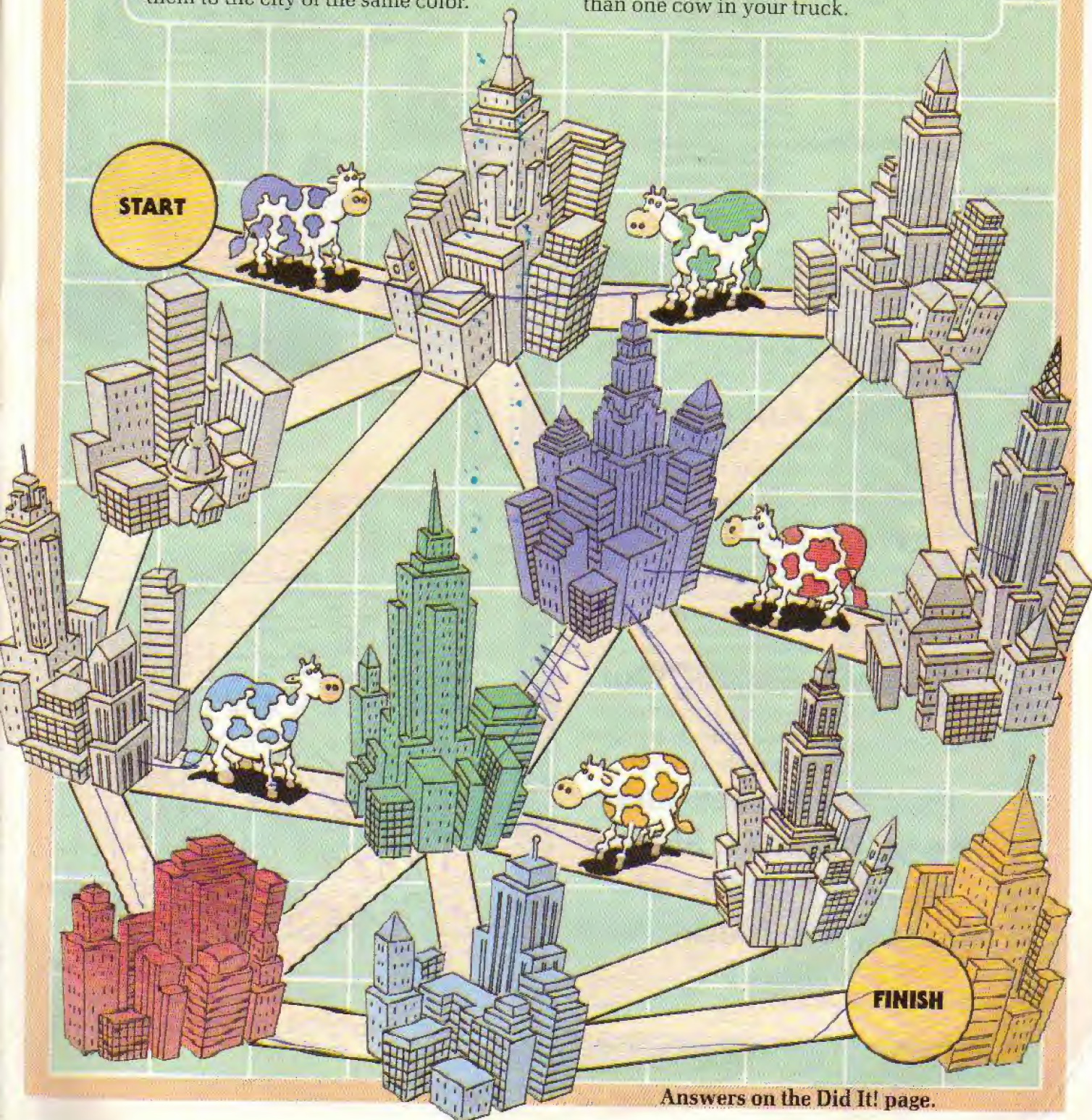


## Purple Cows

For this trip, you'll be travelling in a truck picking up cows along the way. Your mission: To pick up all the cows—the red cow, the blue cow, the green cow, the orange cow and the purple cow—and deliver them to the city of the same color.

(For example, when you pick up the red cow, you must deliver it to the red city.) You must find the shortest route without taking the same path twice.

You begin your trip at **start** and end at **finish**. Remember, you can pick up more than one cow in your truck.

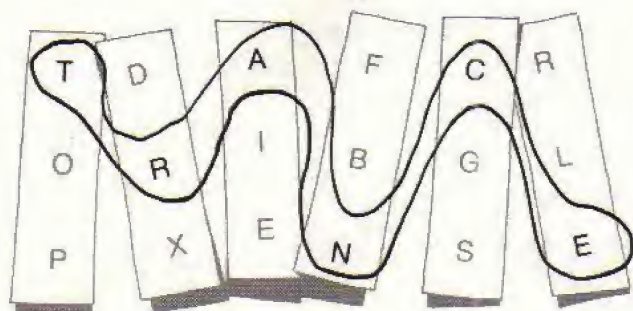


Answers on the Did It! page.



# —Did It!—

## Mental Message



**Answer:** TRANCE

## Next Month!

Here's a sneak peak at what you'll find in the April issue of CONTACT.

### Weird Animals

Meet some of the world's strangest looking animals, and find out why they're not so strange after all.

### It's A Toss-Up!

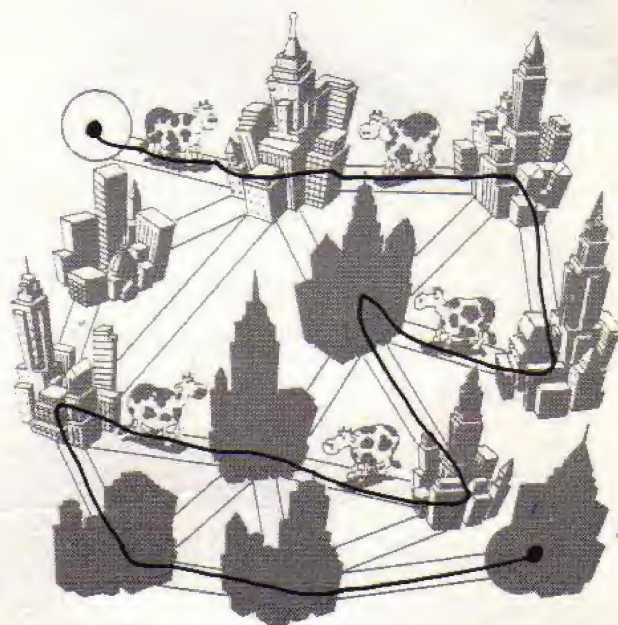
Did you ever want to learn to juggle? Here's your chance, as CONTACT takes a look at what's new and hot in the wacky world of juggling.

### Monkeys Helping Out

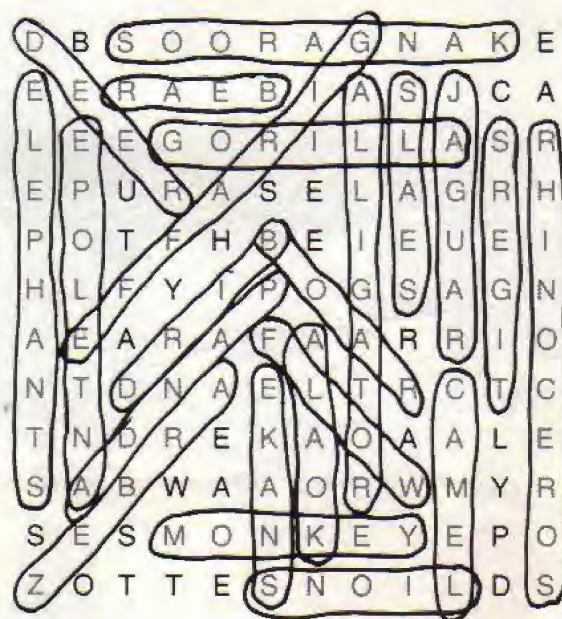
Visit with some monkeys who do more than joke around. These animals are being trained to help people in need.

**Plus The Bloodhound Gang, Factoids, Square One TV Puzzles and Games, and Much, Much More!**

## Purple Cows



## Zoo Search

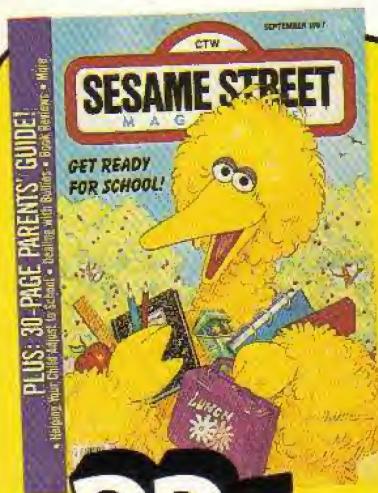


**Answer:** BECAUSE THEY ARE ALWAYS SPOTTED.



# Put the right magazine in your child's hands..

and watch the fun  
and learning begin!



**PRE  
SCHOOL**

ages 2 through 6

## **SESAME STREET MAGAZINE**

From the TV show that revolutionized learning—Big Bird, Bert and Ernie, Grover and all the other “folks” keep your pre-schooler entertained for hours! Ten terrific times a year for just \$12.97.



ages **6 to  
10**

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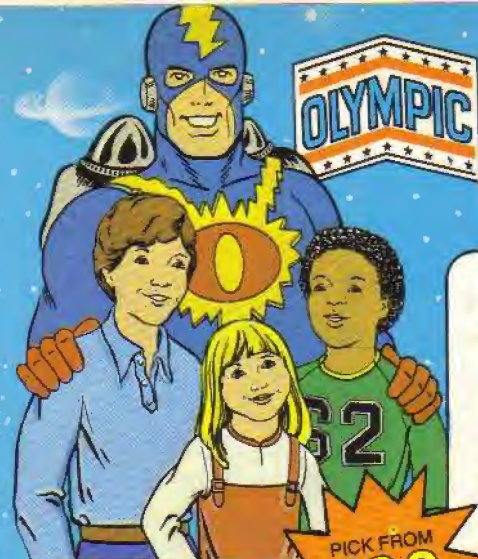
ages **8 to  
14**

## **3-2-1 CONTACT MAGAZINE**

Award winning articles about Nature, Science and Technology. Each issue is packed with puzzles, projects, and challenging Square One TV math pages ...All designed to help your child learn while having fun. Ten issues for just \$13.97.

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UNISONIC "HOT NUMBERS" SOLAR CALCULATOR  
Sell 8 Items



KODAK 35mm CAMERA OUTFIT  
Sell 31 Items



VARIFLEX "BREAKER" SKATEBOARD  
Sell 25 Items



RADIO CONTROL CORVETTE  
Sell 12 Items



TURBO RACE SET  
Sell 20 Items



ARMITRON CALCULATOR ALARM WATCH  
Sell 10 Items



SNO-SURF TUBE  
Sell 10 Items



SWISS ARMY KNIFE WITH SHEATH  
Sell 10 Items



BIKE GENERATOR LIGHT SET  
Sell 10 Items



TASCO "ROC-BINOC'S" BINOCULARS  
Sell 11 Items



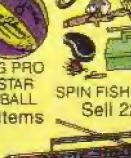
RADIO CONTROL "TURBO LEOPARD"  
Sell 33 Items



SPALDING PRO SUPERSTAR BASKETBALL  
Sell 16 Items



SPIN FISHING OUTFIT  
Sell 22 Items



G.E. STEREO AM/FM CASSETTE HEADSET  
Sell 23 Items



TWO-MAN BOAT KIT  
Sell 20 Items



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Sell 18 Items



UNISONIC PC WORLD CALCULATOR CLOCK  
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GIRLS' CHANGEABLE-BANDS WATCH  
Sell 18 Items



KODAK "STAR" POCKET INSTAMATIC CAMERA OUTFIT  
Sell 13 Items



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Sell 52 Items



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Sell 9 Items



KODAK "STYLELITE" POCKET CAMERA OUTFIT  
Sell 20 Items



SKILCRAFT RADAR BALL  
Sell 12 Items



CALLIGRAPHY MARKER SET  
Sell 9 Items



LORUS CHRONO-ALARM WATCH  
Sell 11 Items



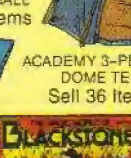
G.E. AM/FM LED DIGITAL CLOCK RADIO  
Sell 18 Items



THE RAG BAG  
Sell 17 Items



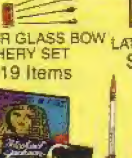
BLACKSTONE MAGIC SHOW SET  
Sell 12 Items



KODAK "CHALLENGER" DISC CAMERA OUTFIT  
Sell 17 Items



CBS RECORDS OR TAPES  
Sell 8 Items



ESTES ELECTRIC LAUNCH ROCKET KIT  
Sell 18 Items



COX P-51 MUSTANG  
Sell 21 Items



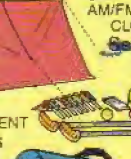
TASCO TELESCOPE  
Sell 26 Items



ACADEMY NYLON BACKPACK TENT  
Sell 21 Items



ZIPPER CARRY-ALL BAG  
Sell 8 Items



WEBCOR ZIP TELEPHONE  
Sell 13 Items



X-ACTO DELUXE KNIFE CHEST  
Sell 11 Items



TASCO MICROSCOPE LAB  
Sell 17 Items



HOUSEHOLD BATTERY CHARGER  
Sell 12 Items



RADIO CONTROL OFF ROAD 4x4  
Sell 17 Items



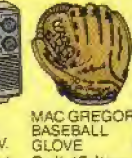
MAC GREGOR BASEBALL GLOVE  
Sell 13 Items



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Sell 27 Items



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BONTEMPI ELECTRIC ORGAN  
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G.E. WALKIE-TALKIE SET WITH MORSE CODE  
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